

# ADVANCED MATERIALS

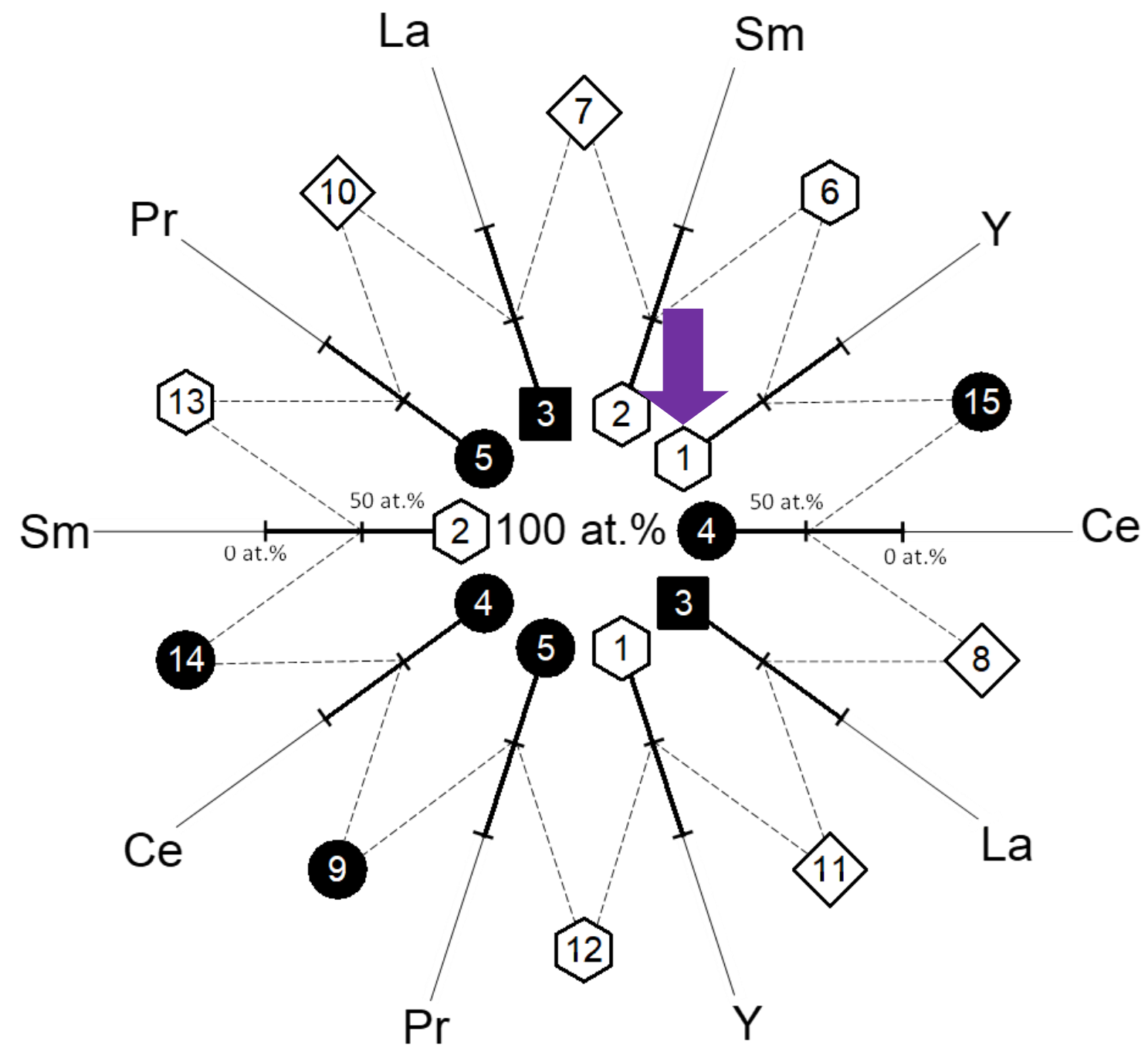
## Supporting Information

for *Adv. Mater.*, DOI: 10.1002/adma.202102301

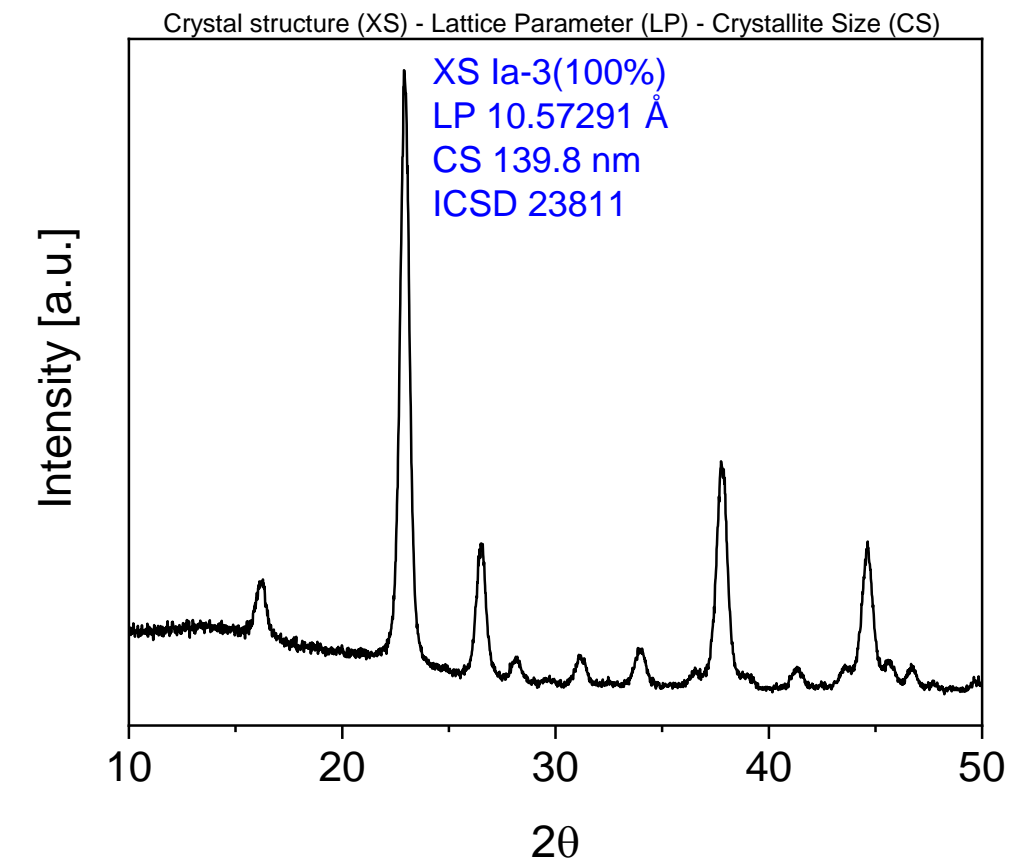
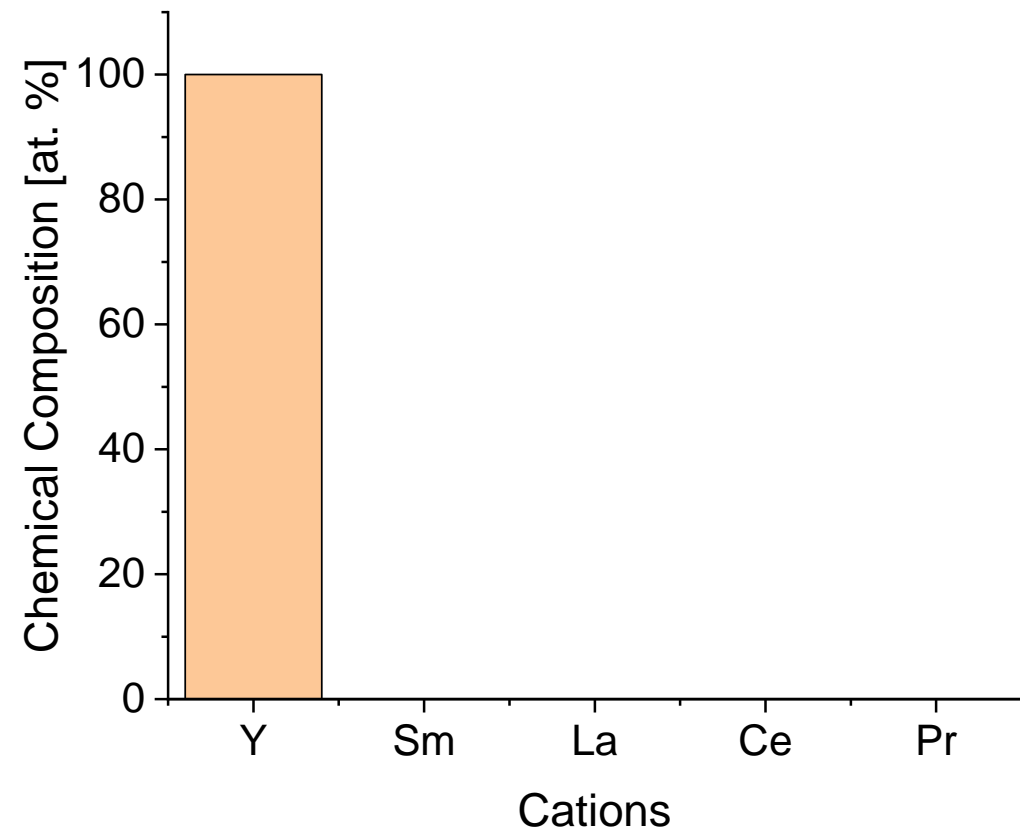
Phase–Property Diagrams for Multicomponent Oxide  
Systems toward Materials Libraries

*Leonardo Velasco,\* Juan S. Castillo, Mohana V. Kante,  
Jhon J. Olaya, Pascal Friederich, and Horst Hahn*

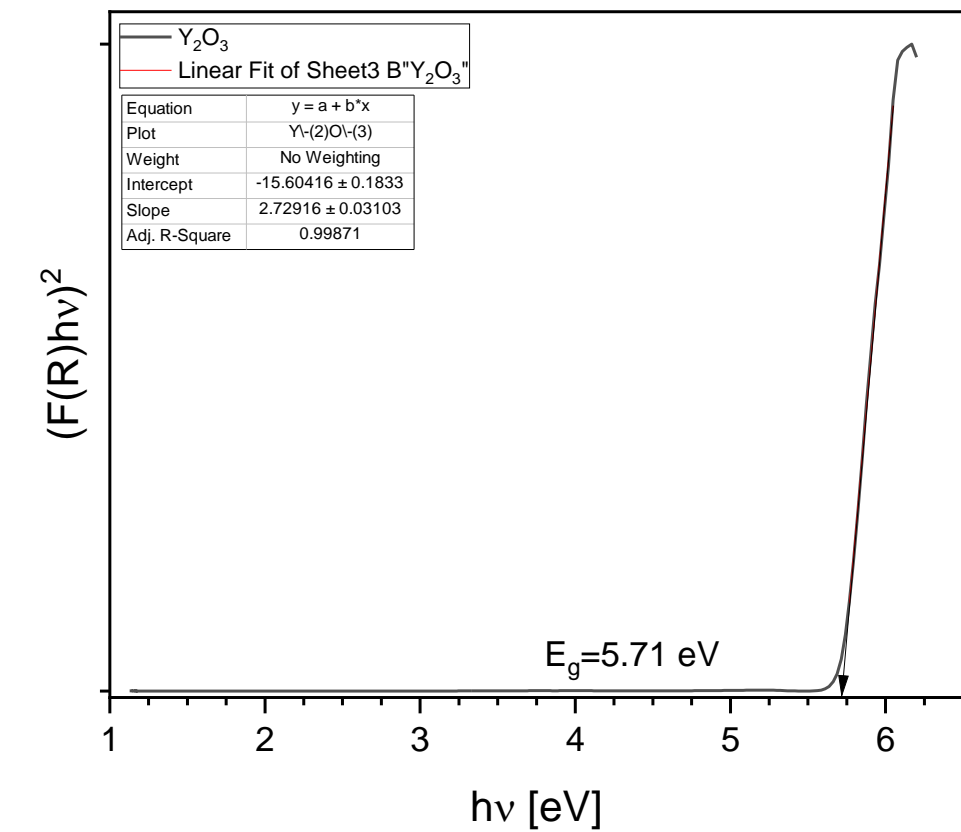
# Sample 1



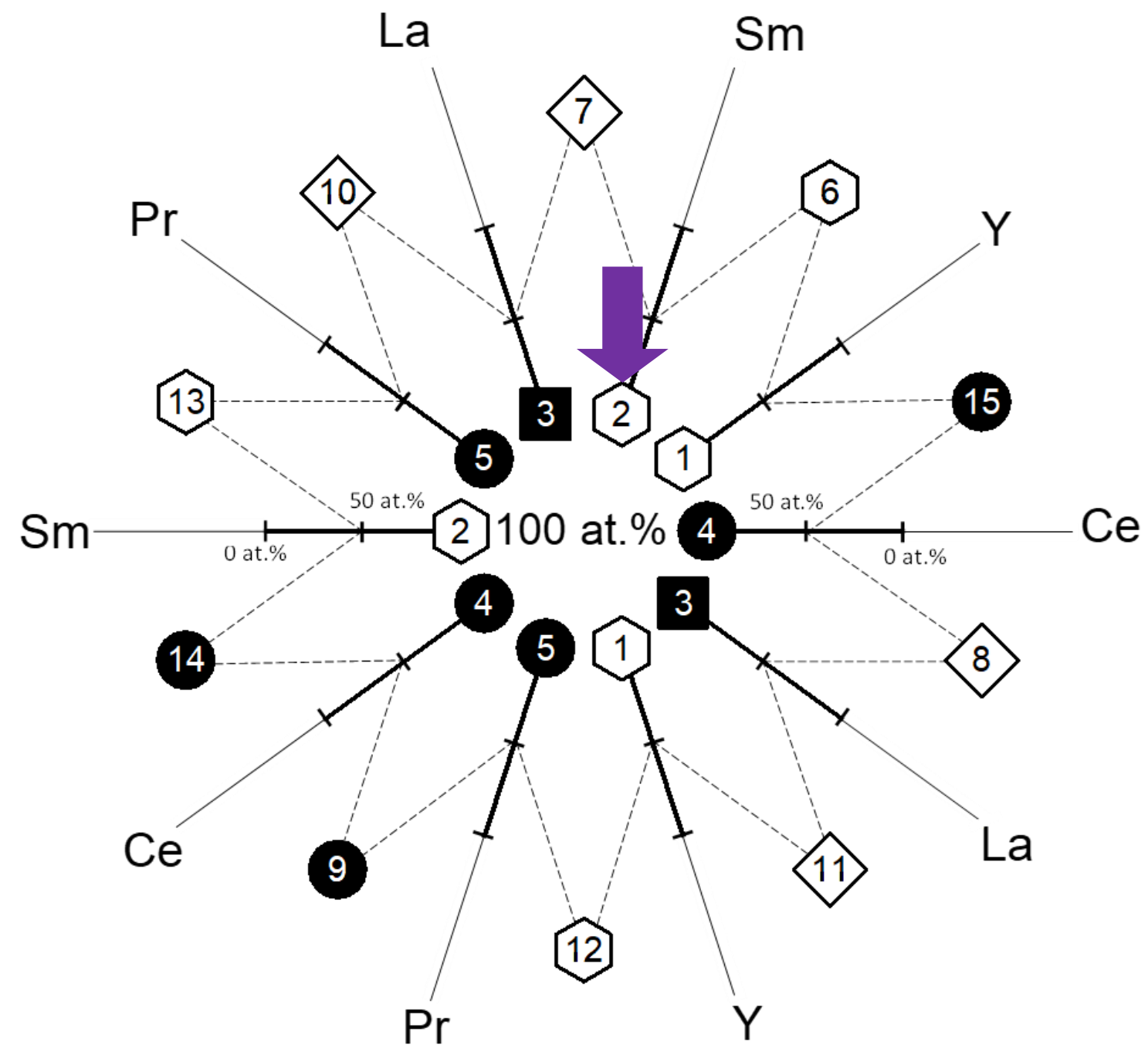
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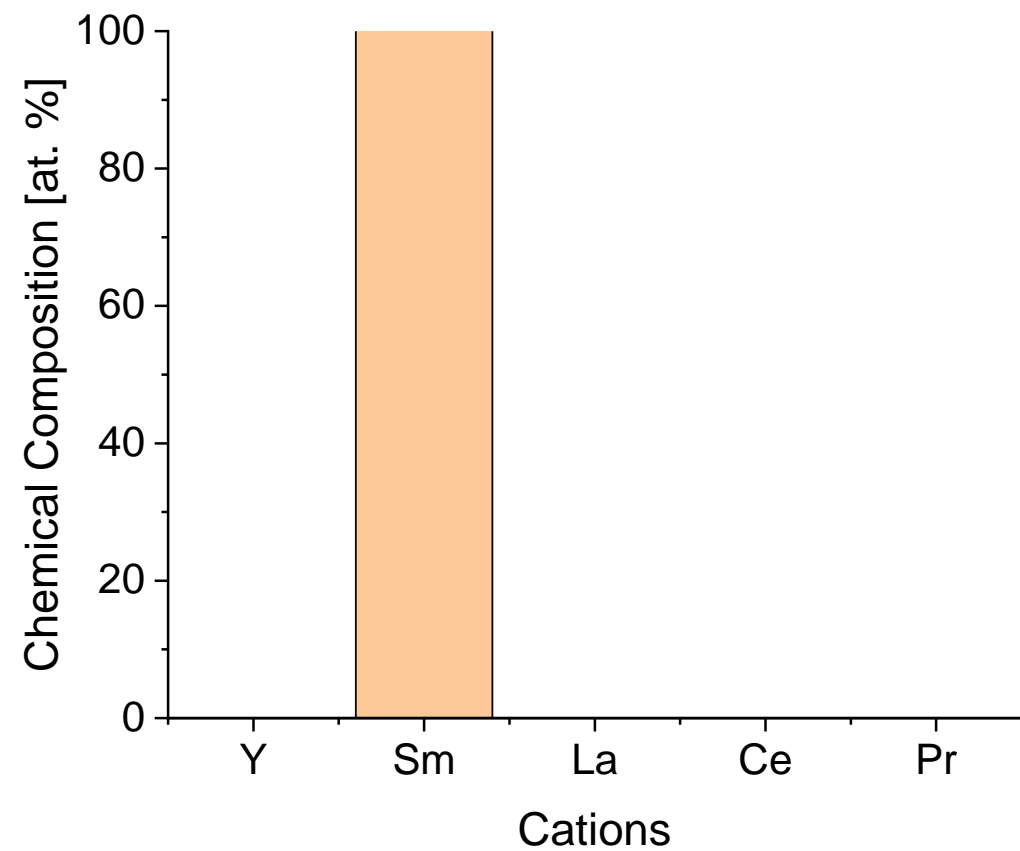
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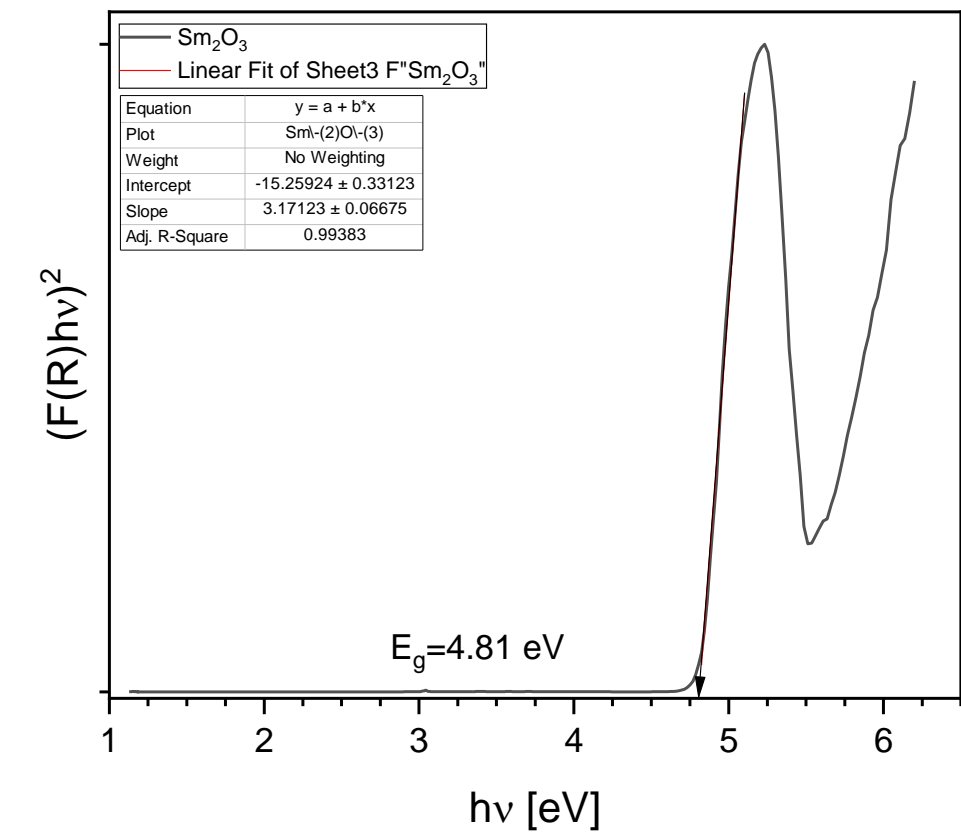
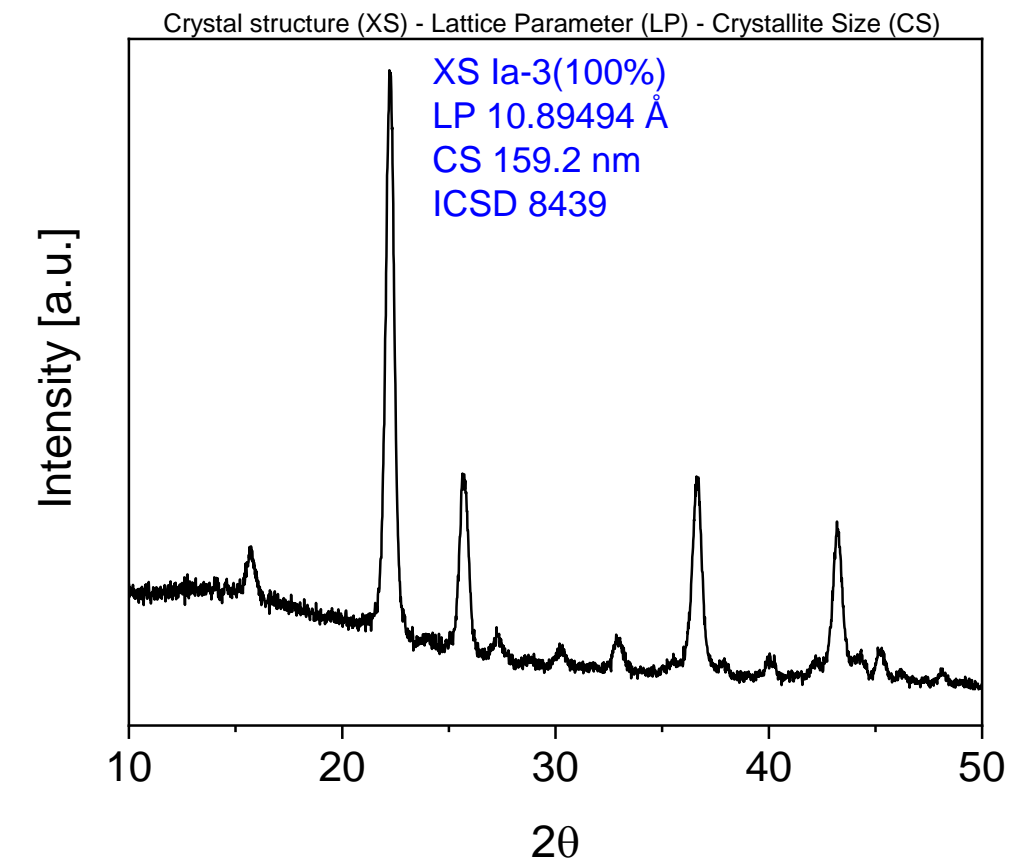
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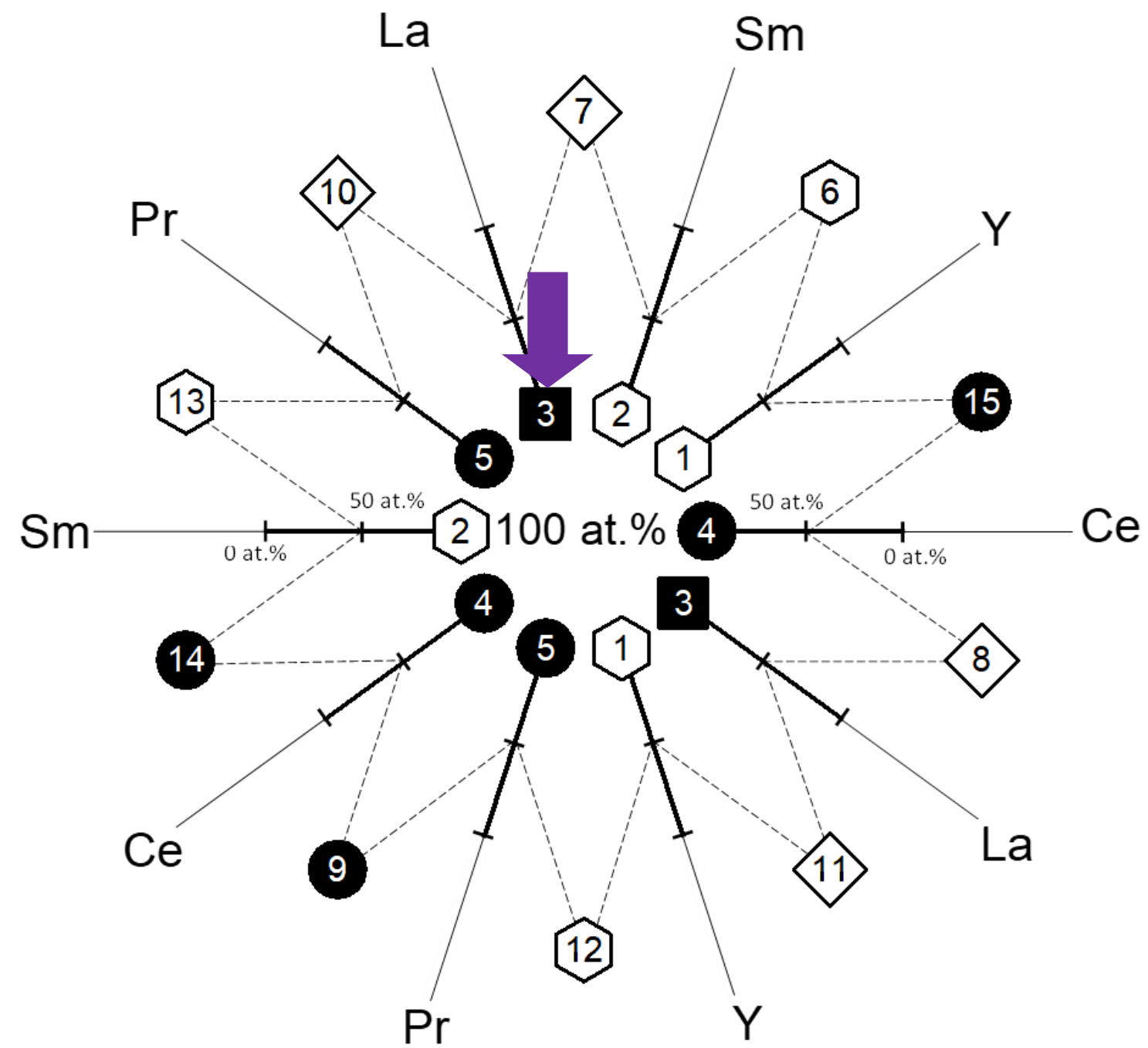
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase



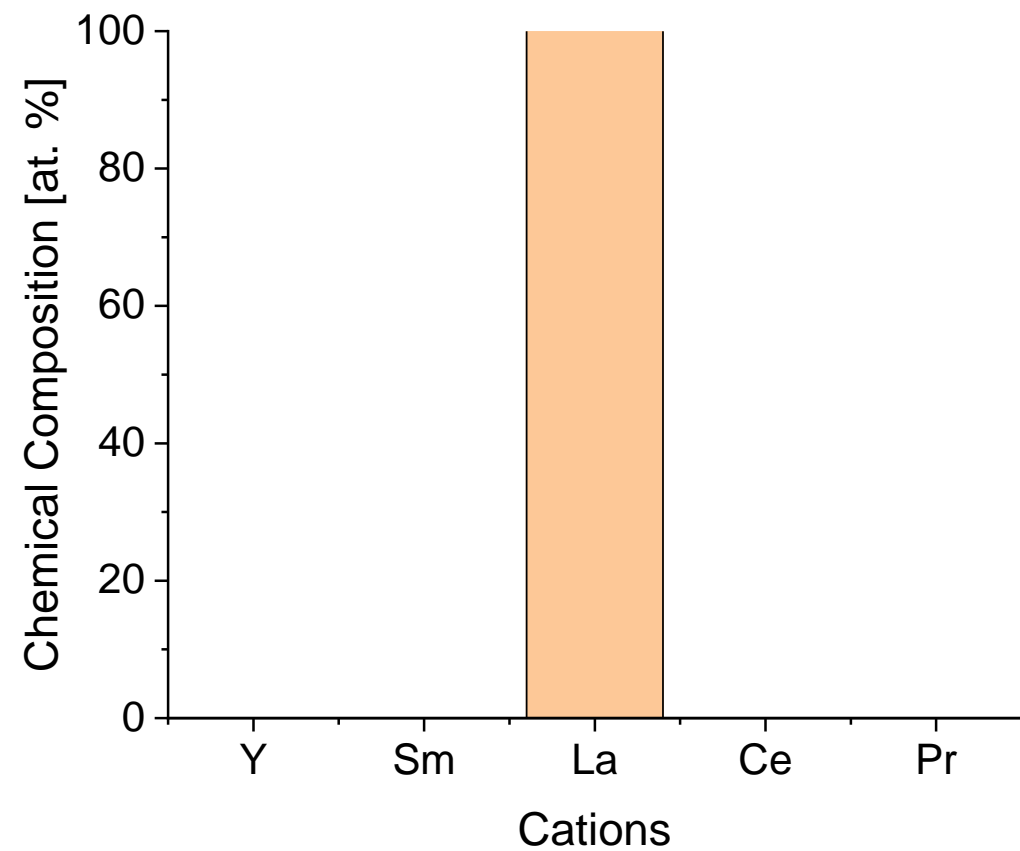
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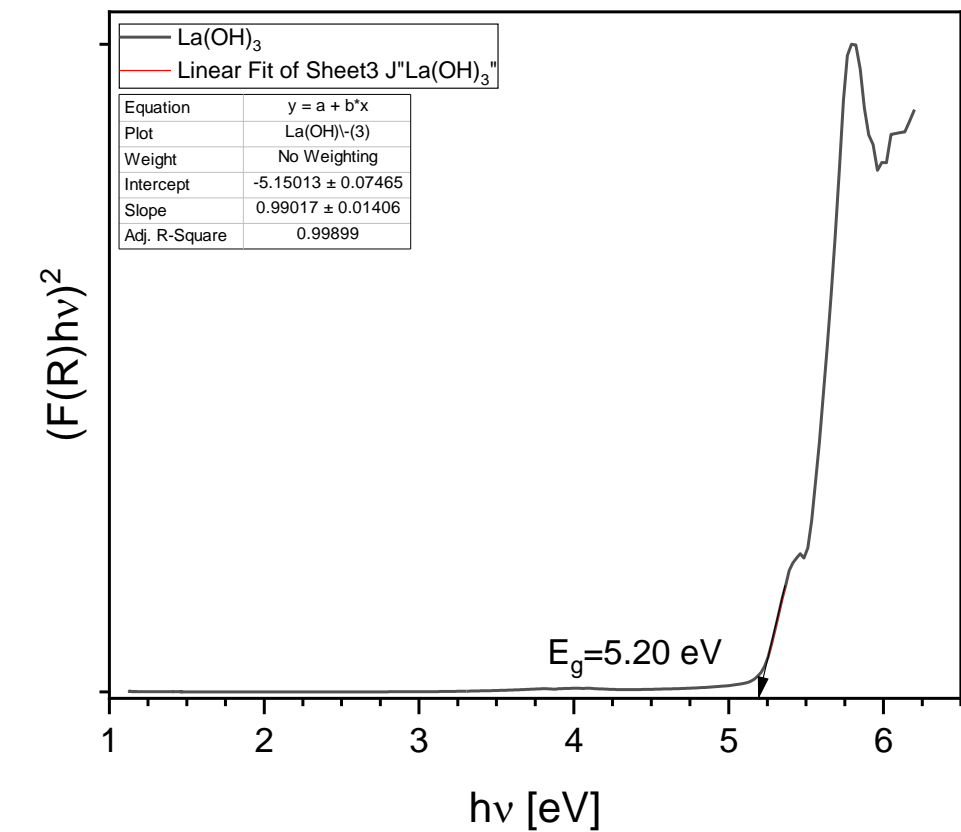
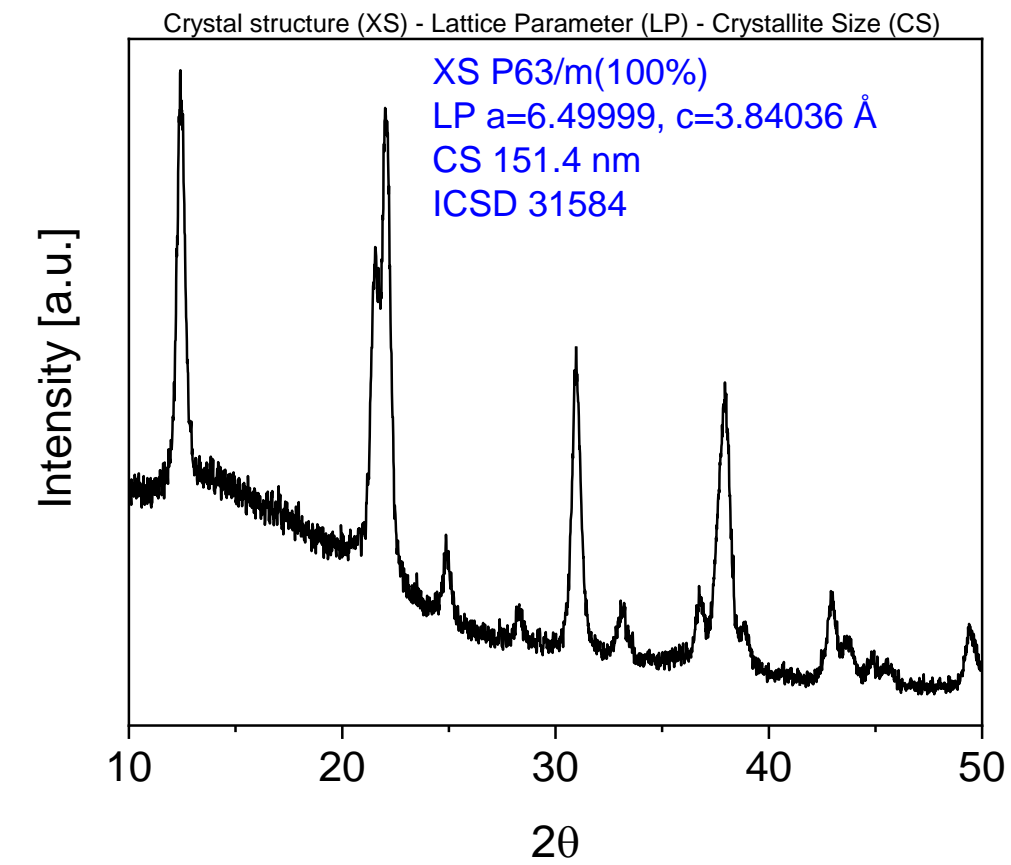
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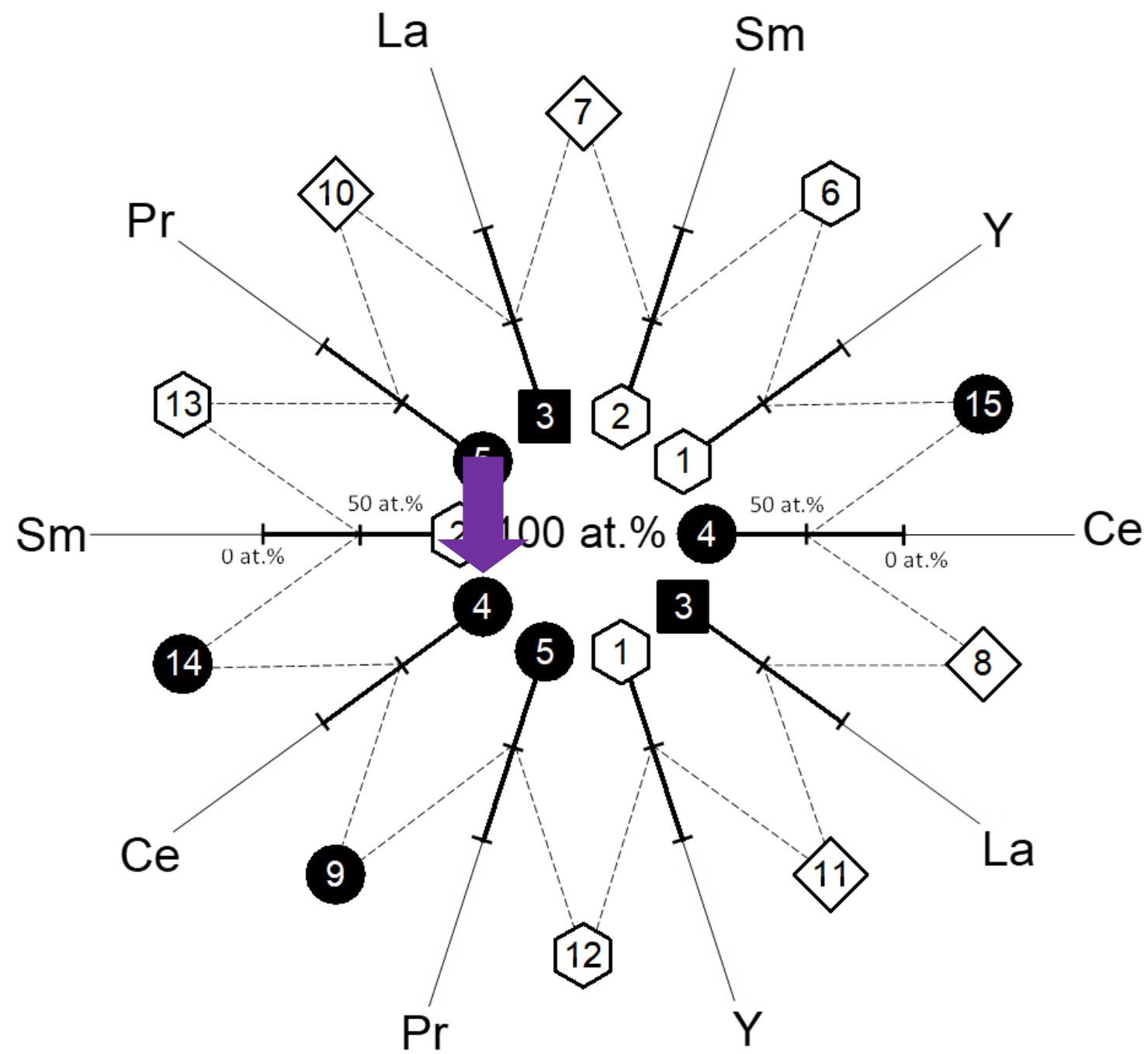
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase



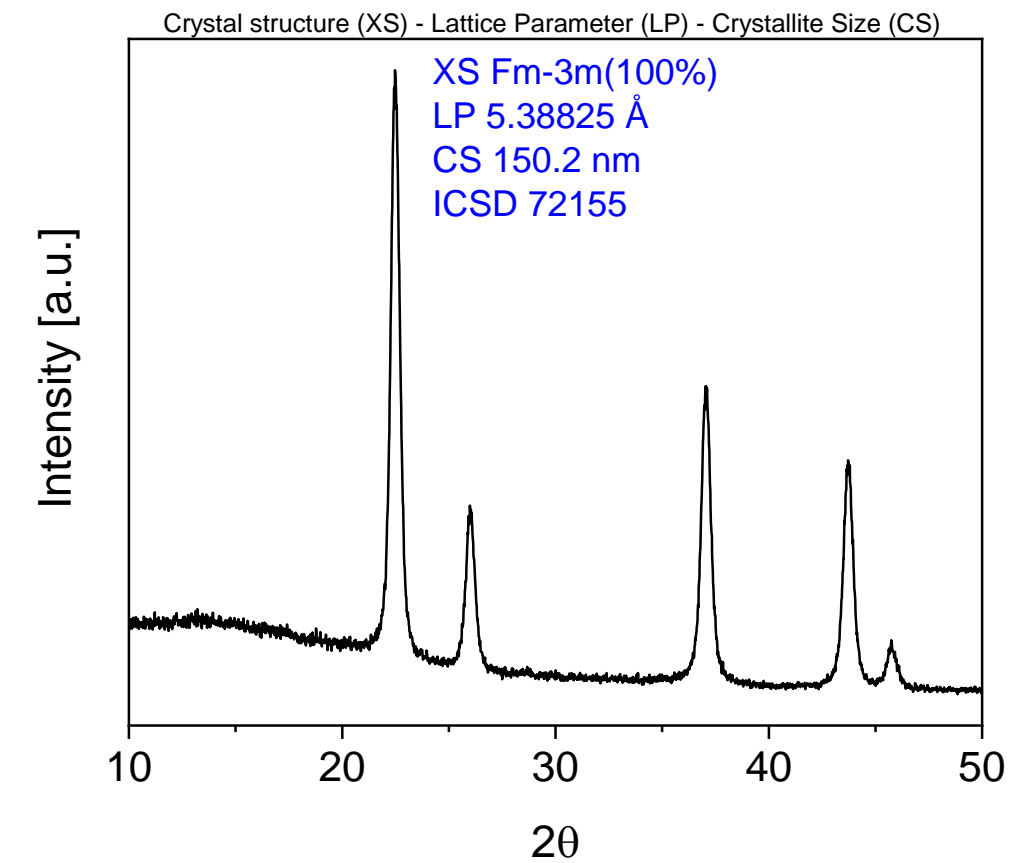
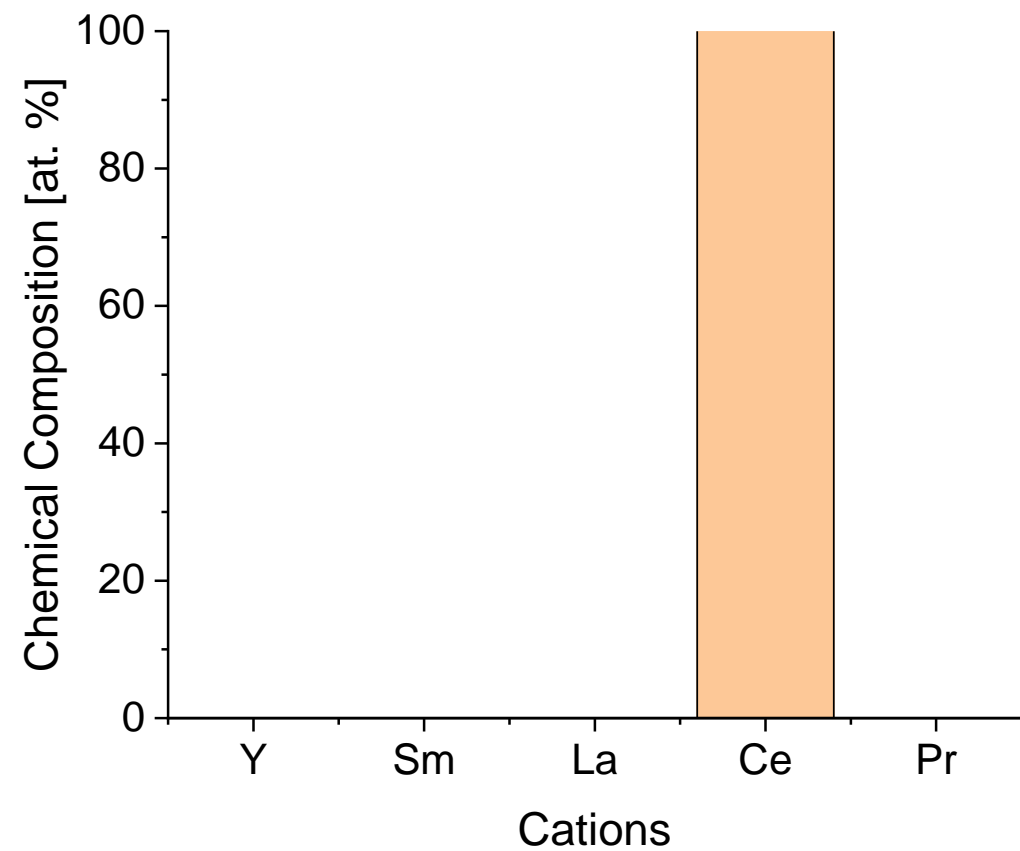
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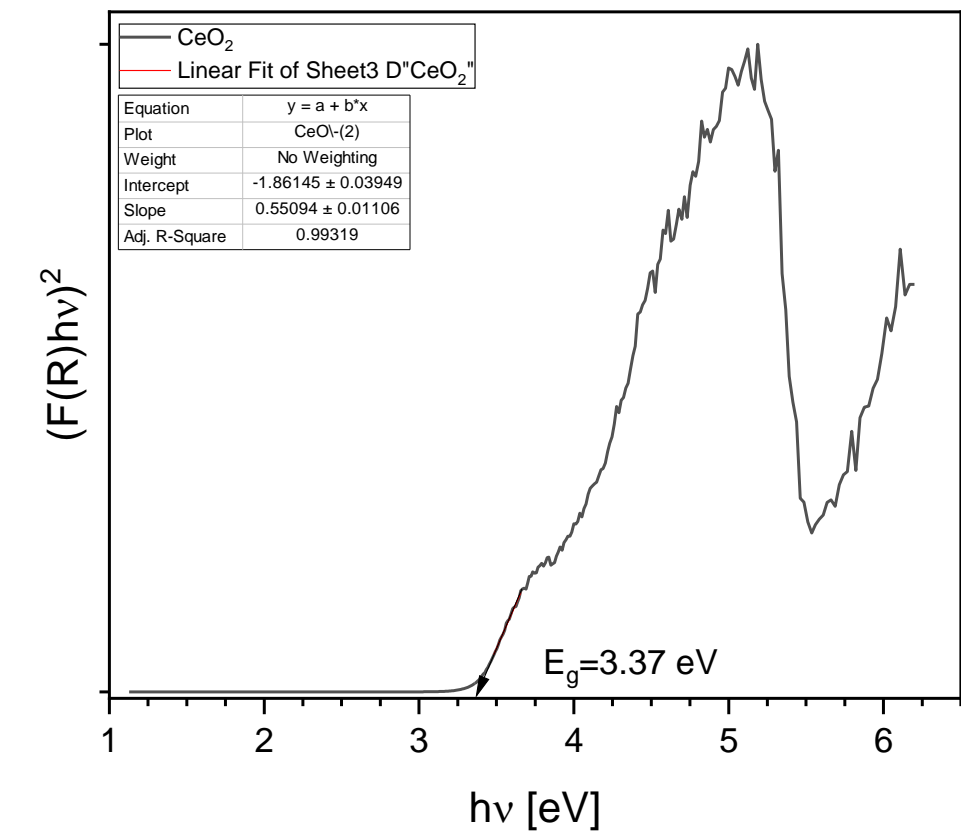
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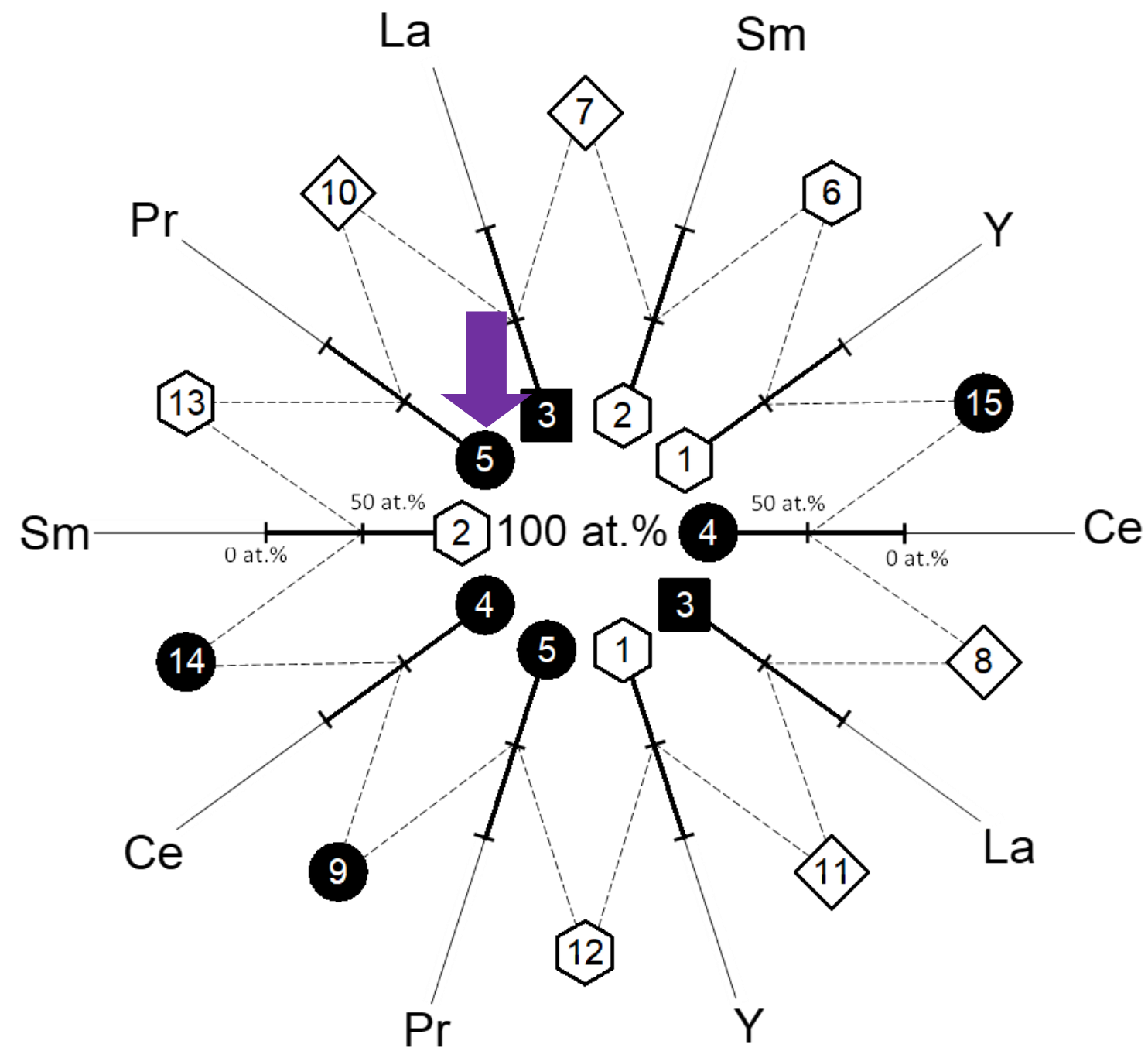
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase



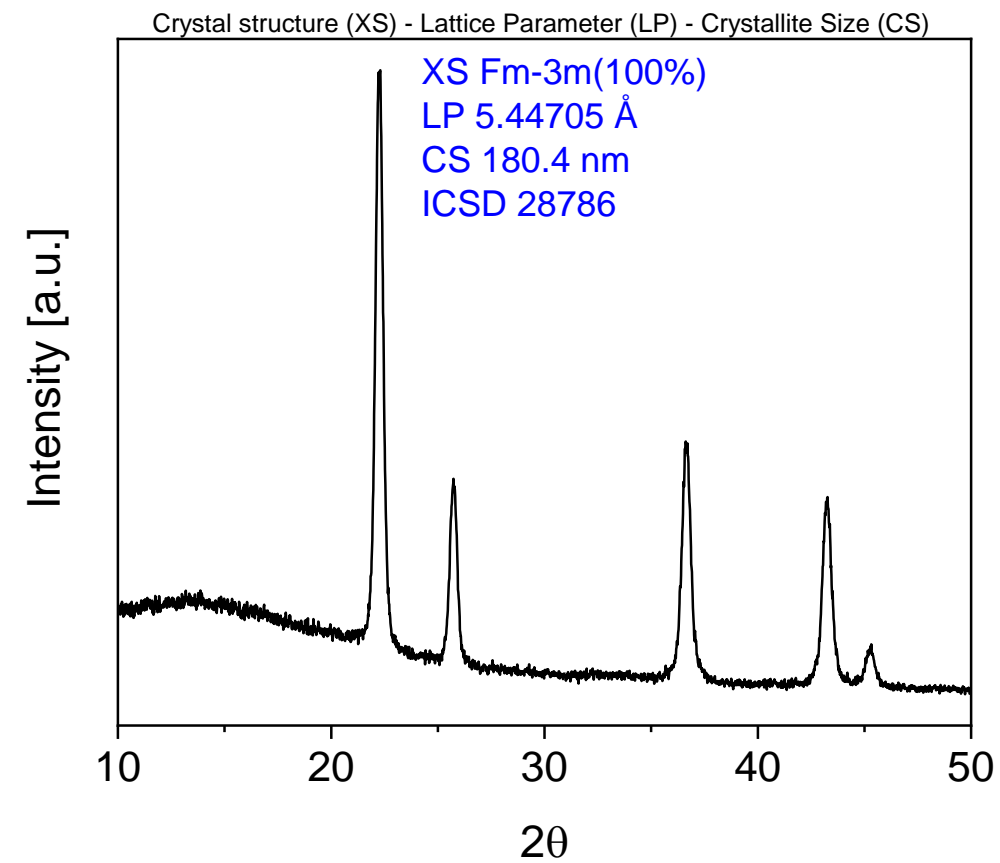
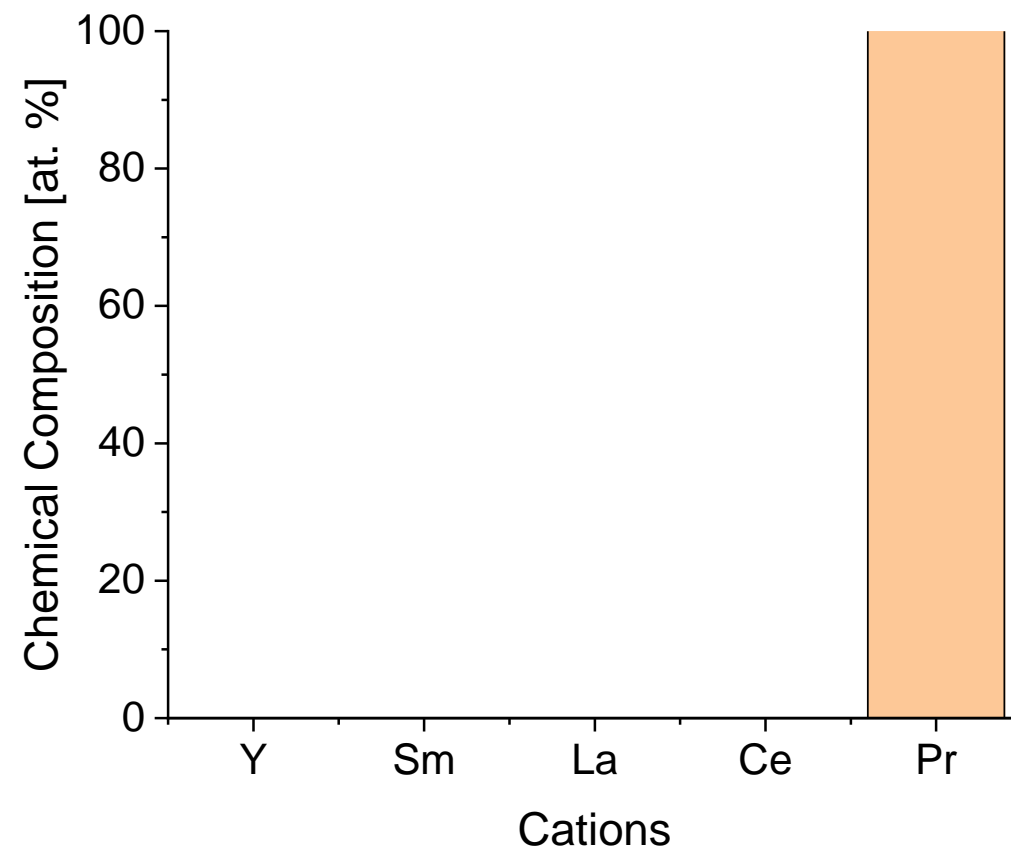
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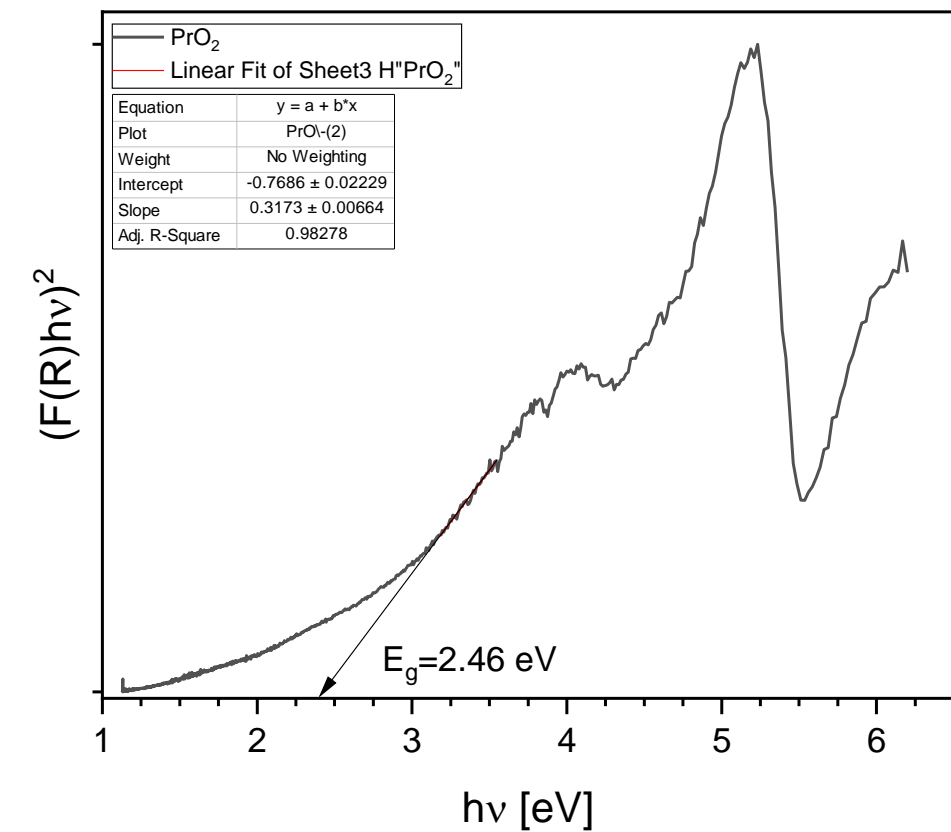
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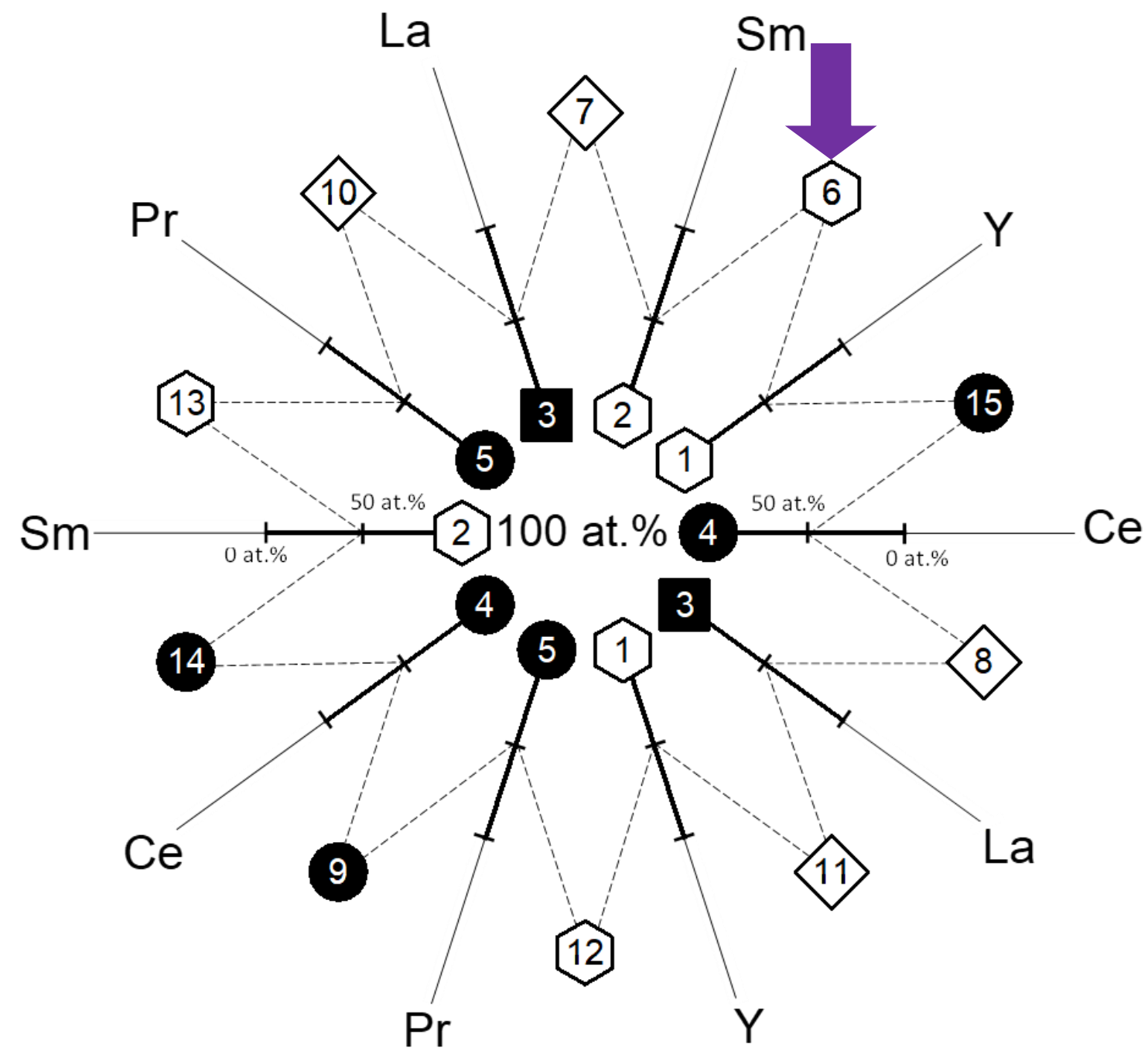
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase



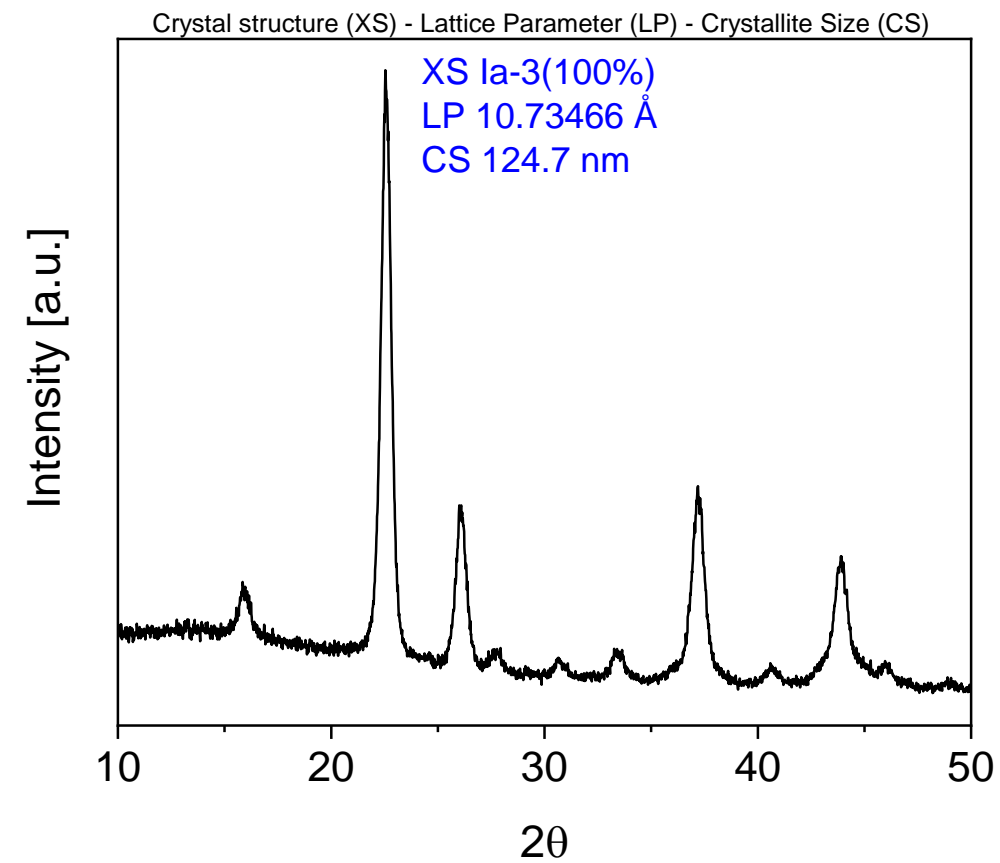
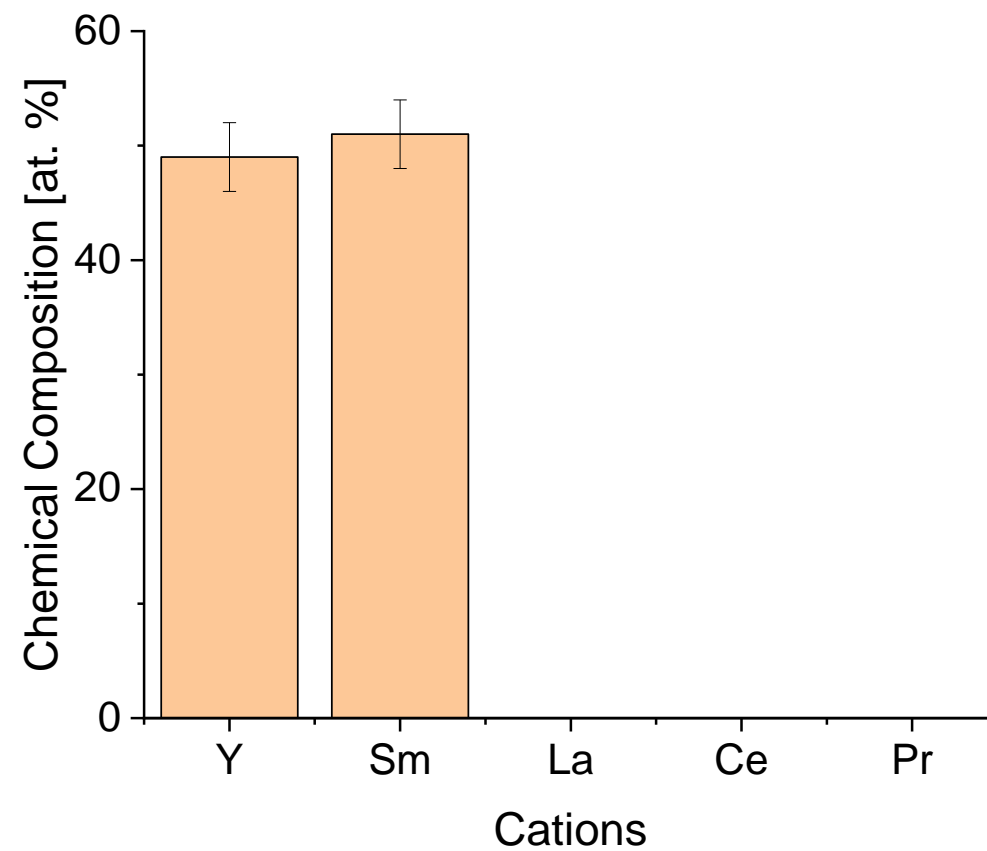
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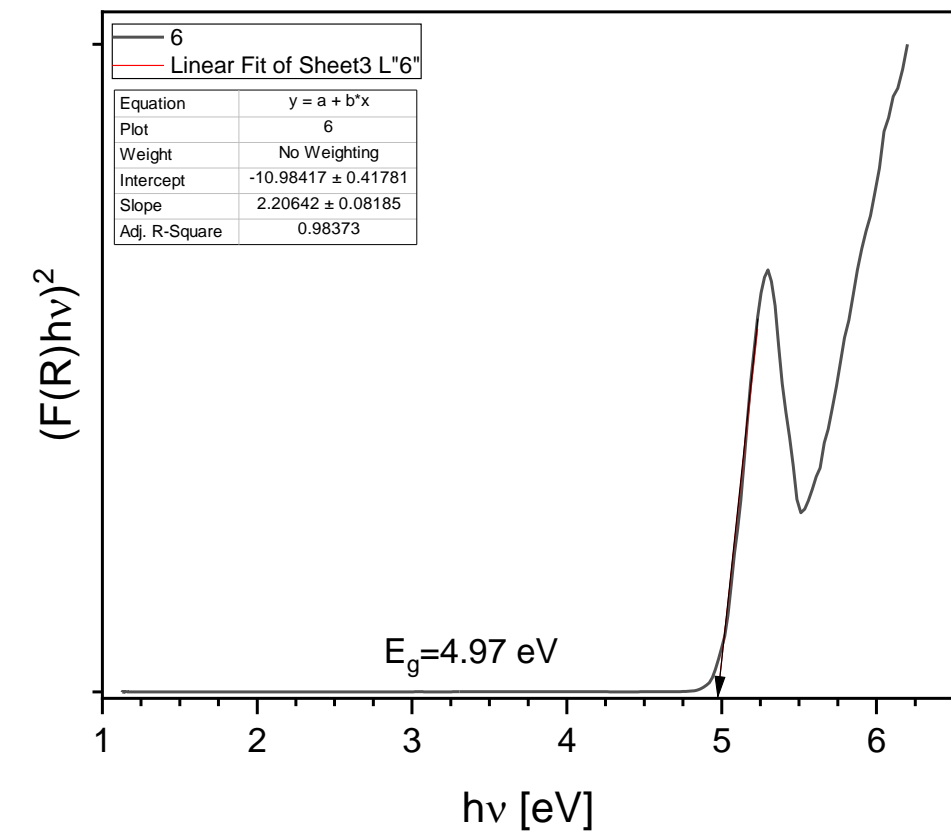
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○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase

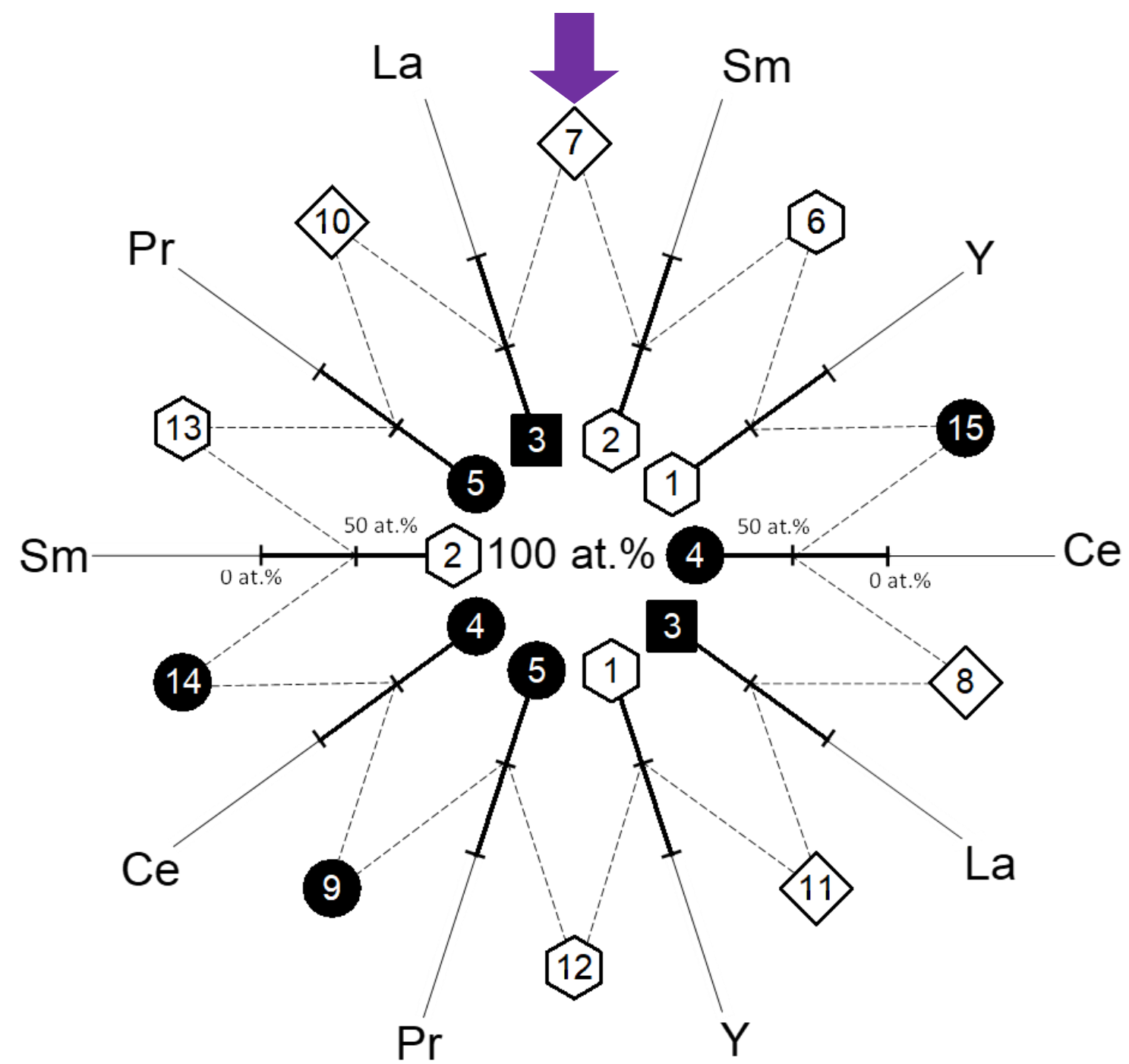


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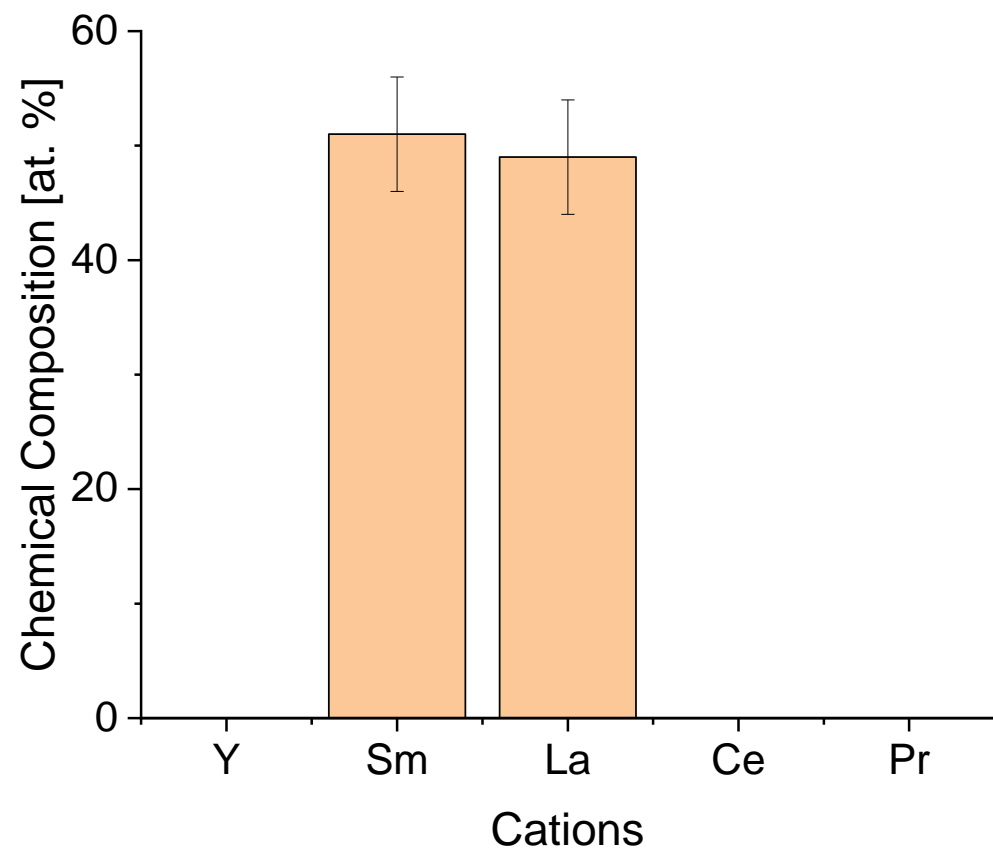




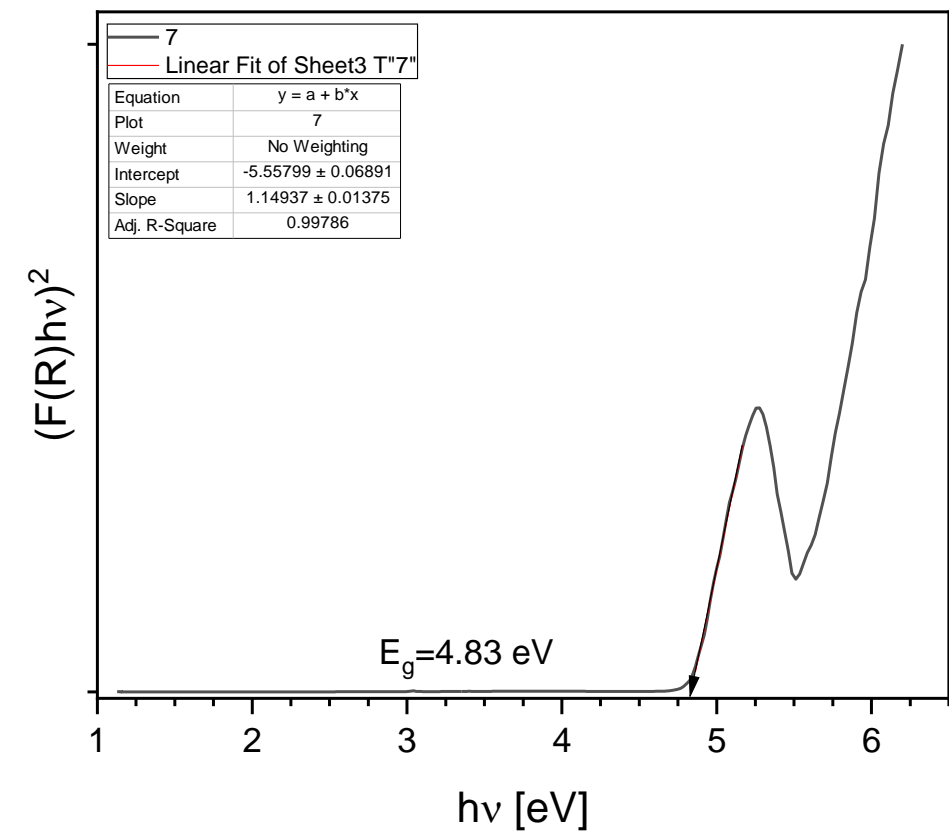
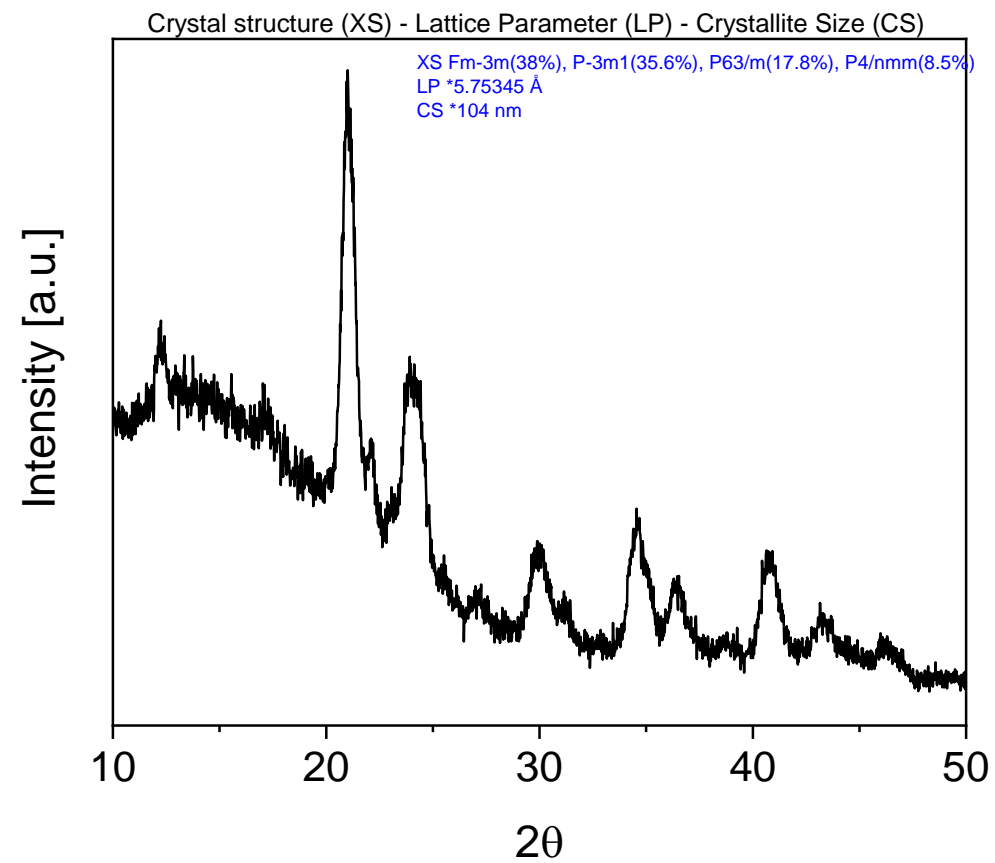
# Sample 7



○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase

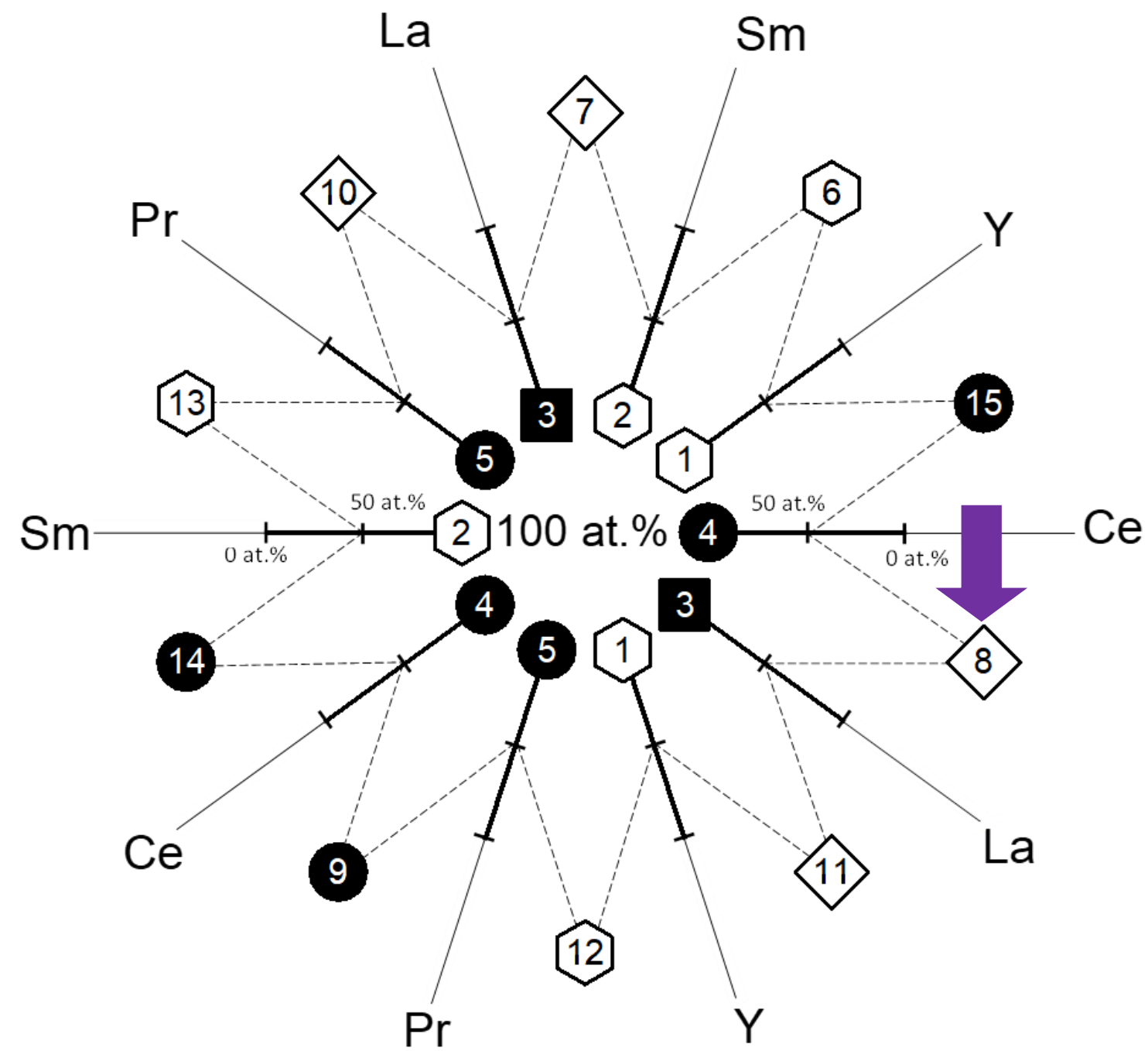


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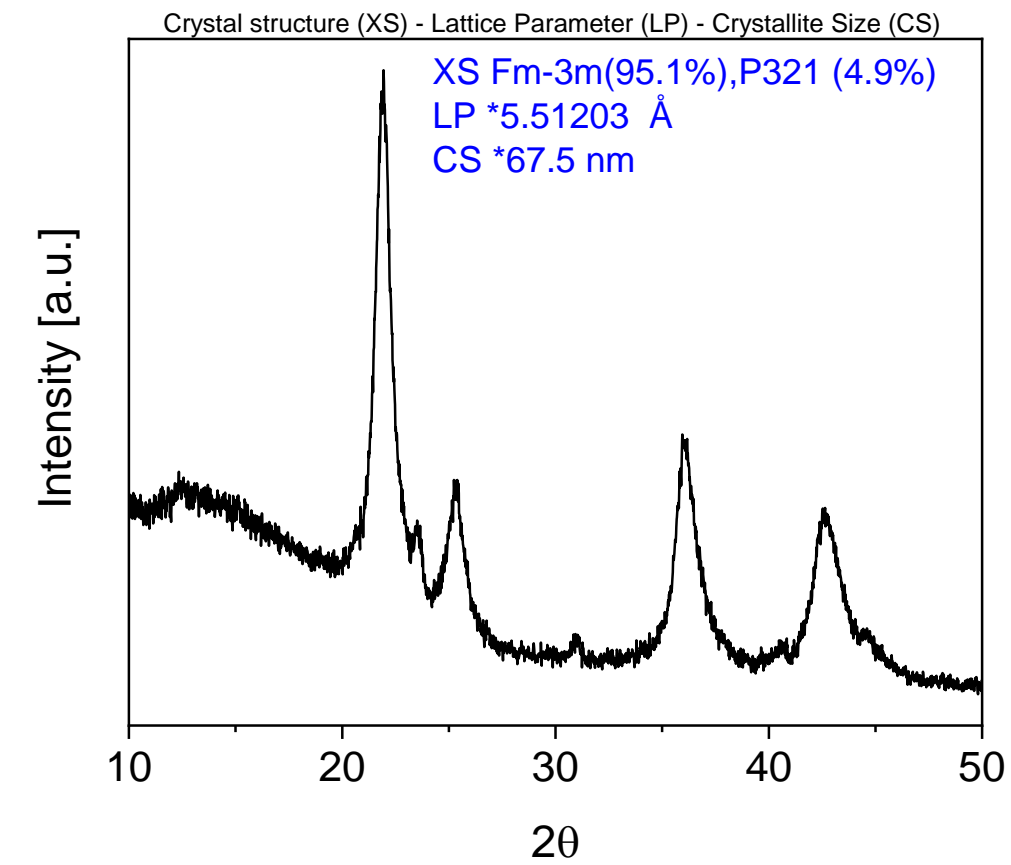
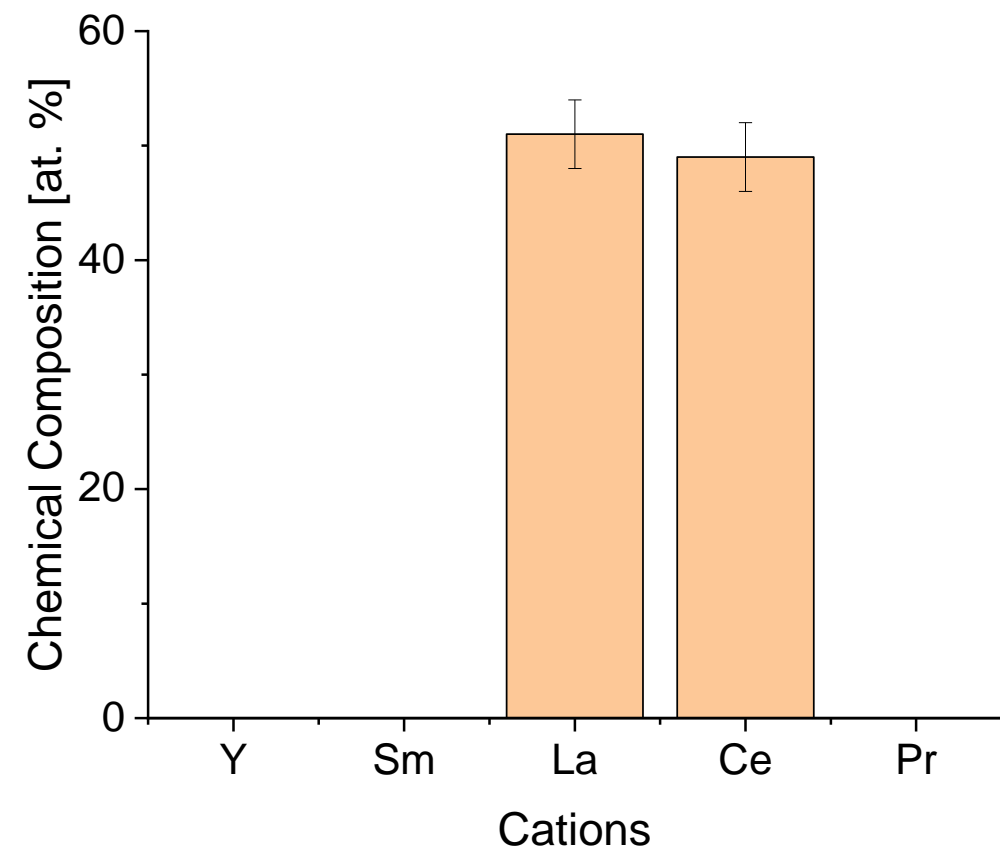




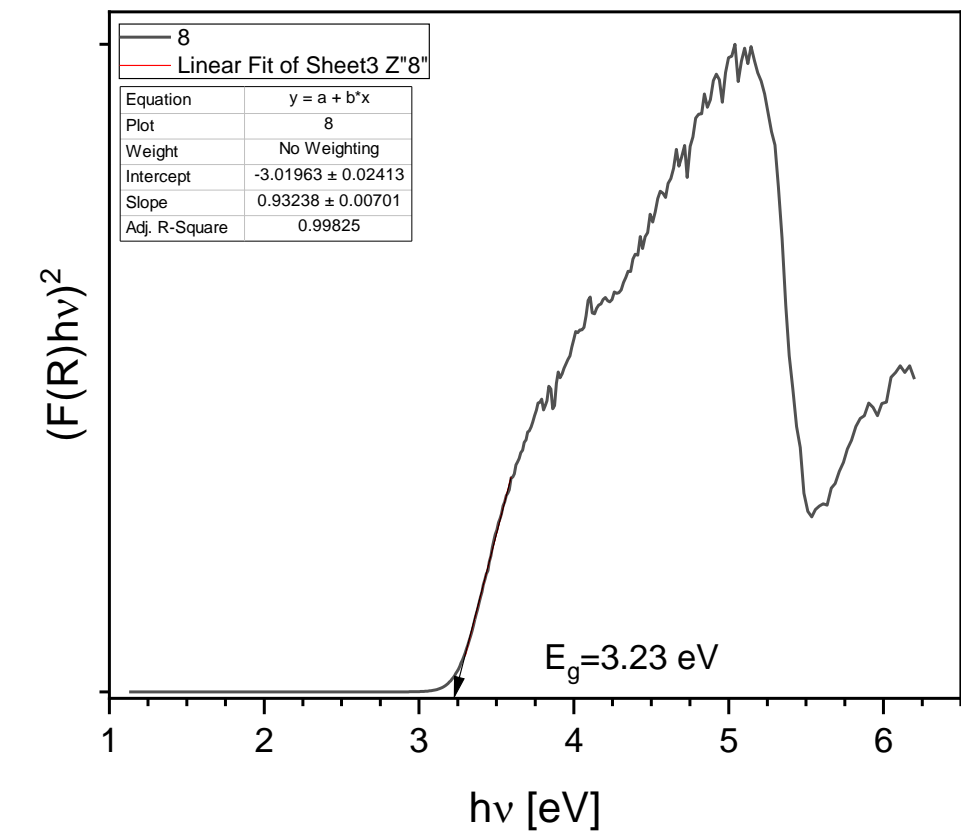
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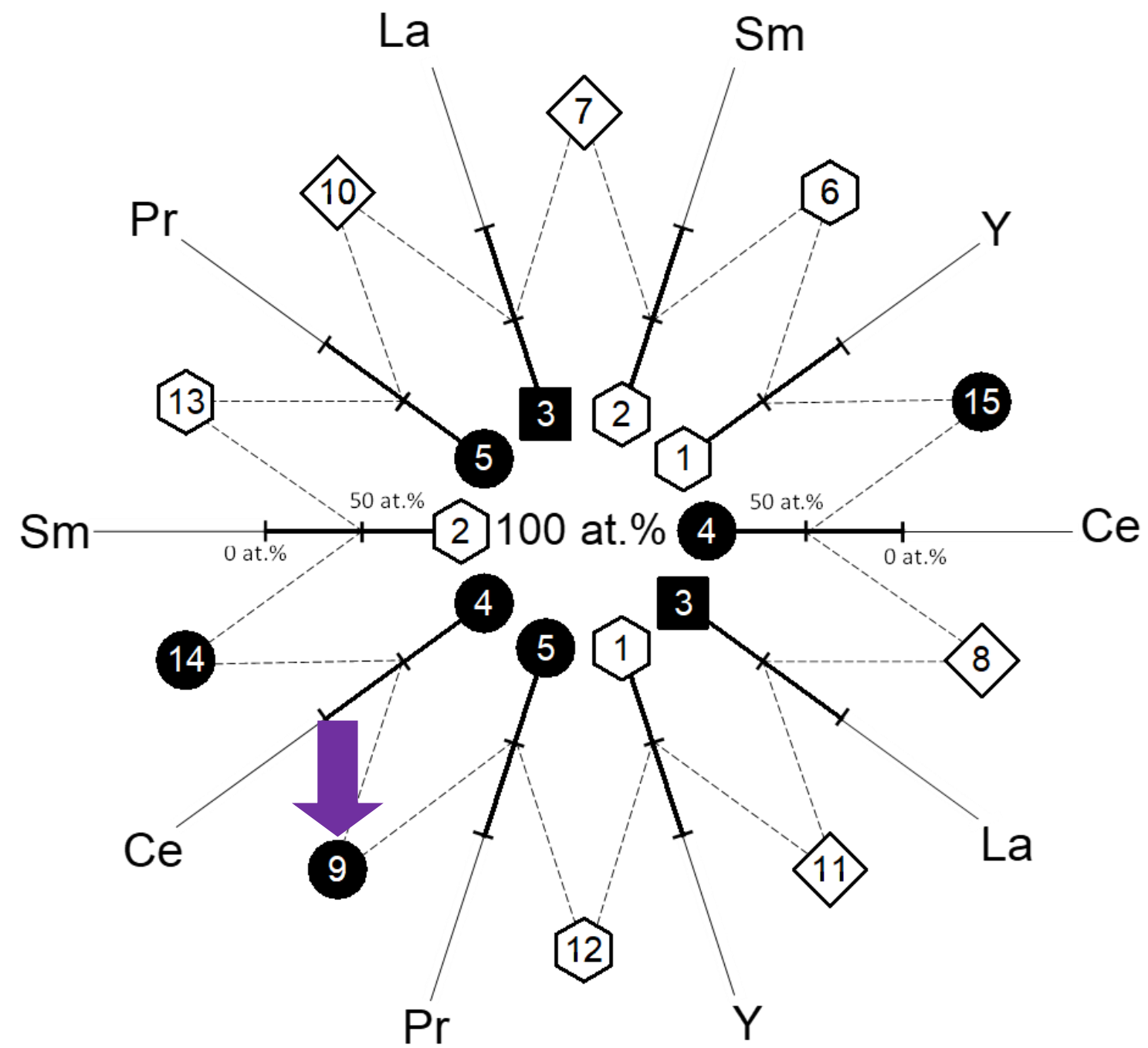
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase



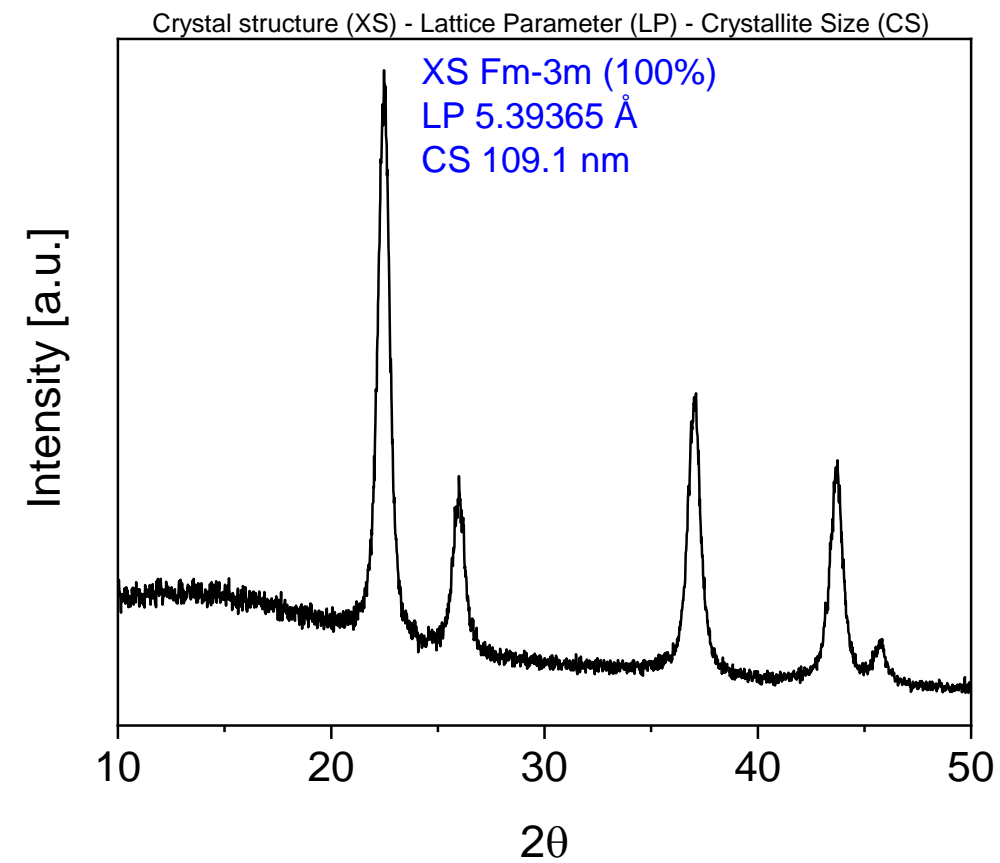
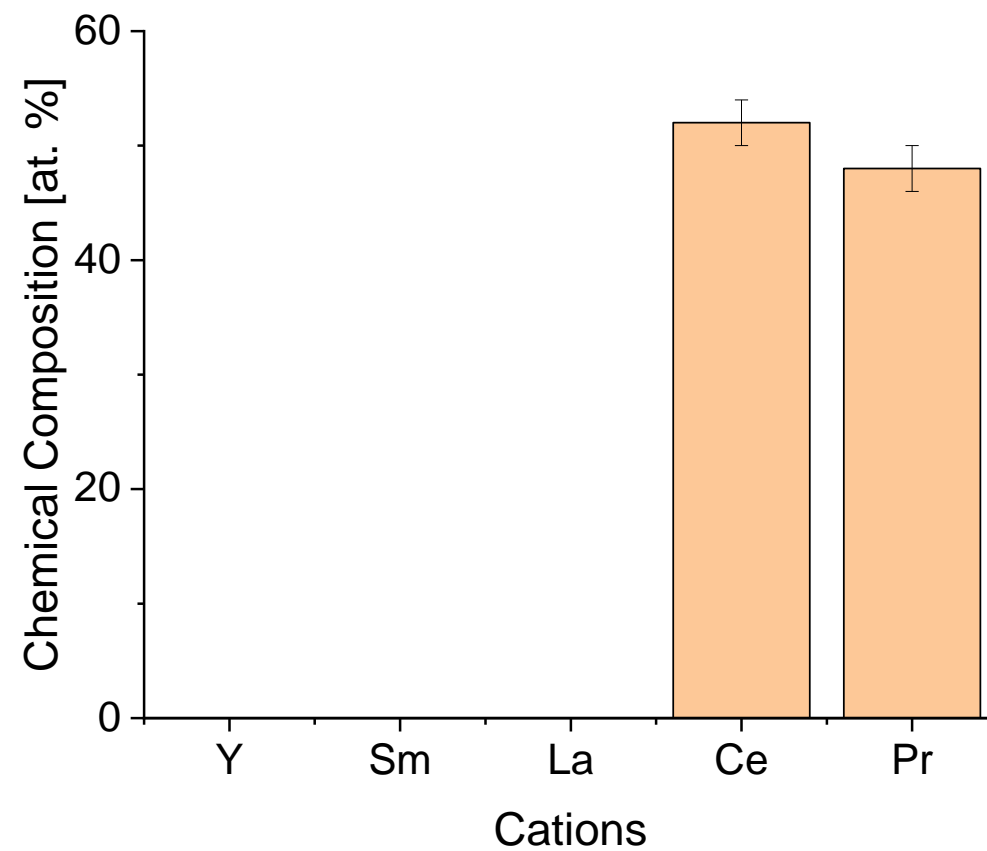
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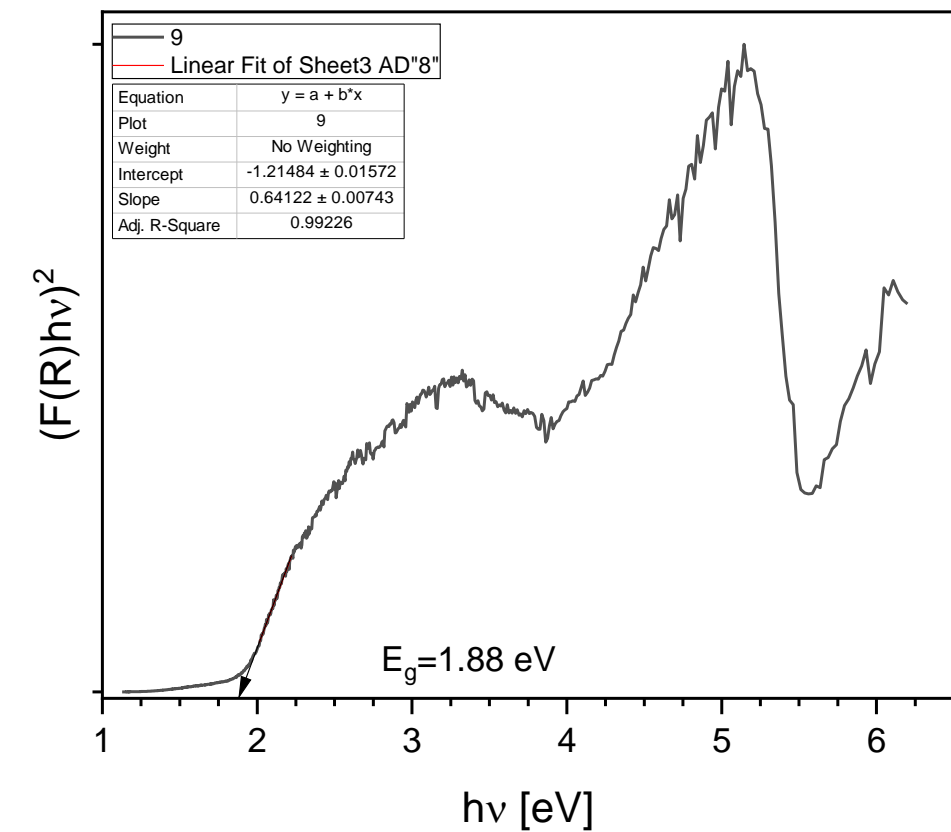
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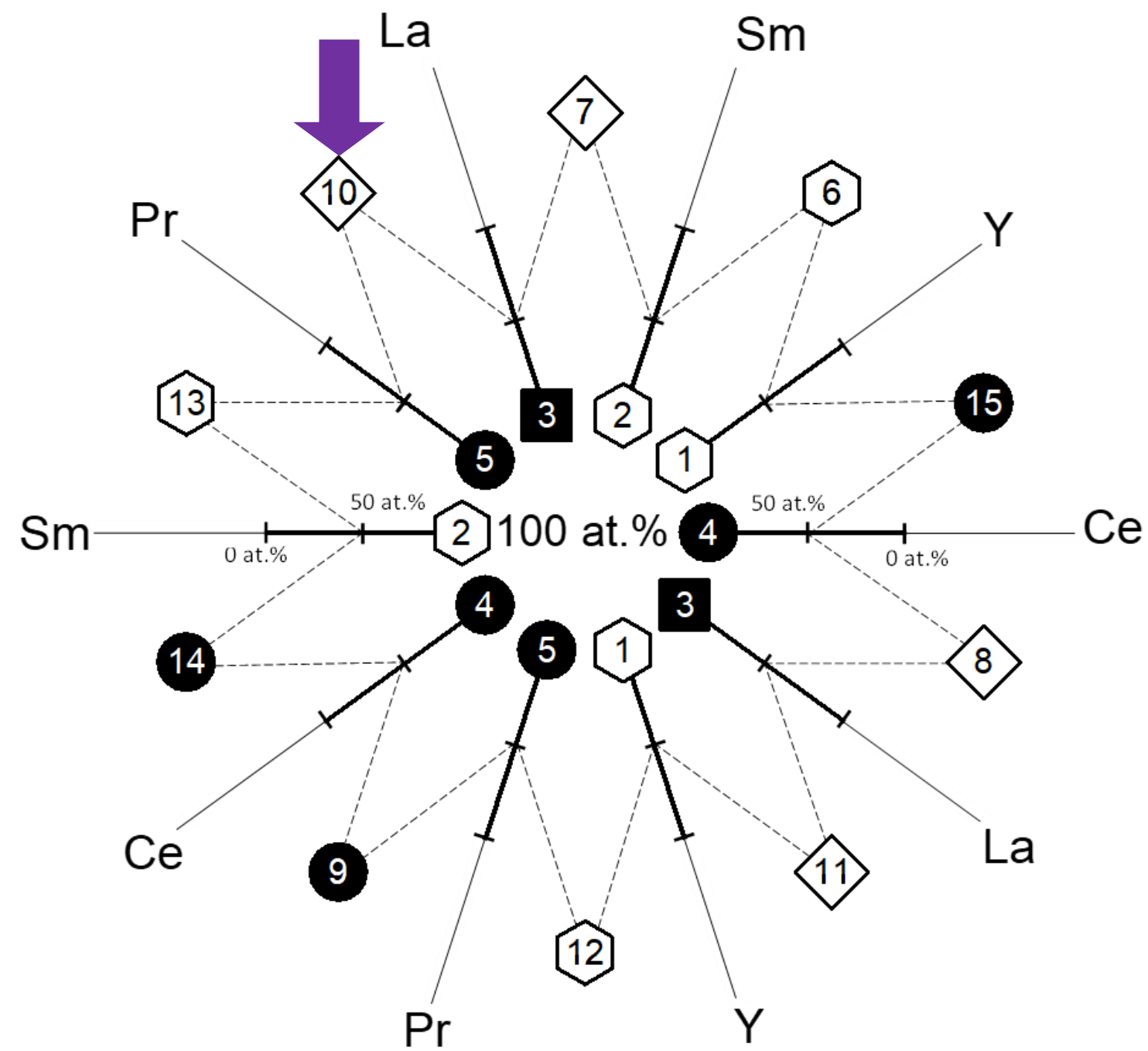
○ Single Phase  $Ia\bar{3}$ 
● Single Phase  $Fm\bar{3}m$ 
■ Single phase  $P63/m$ 
◇ Multiple Phase



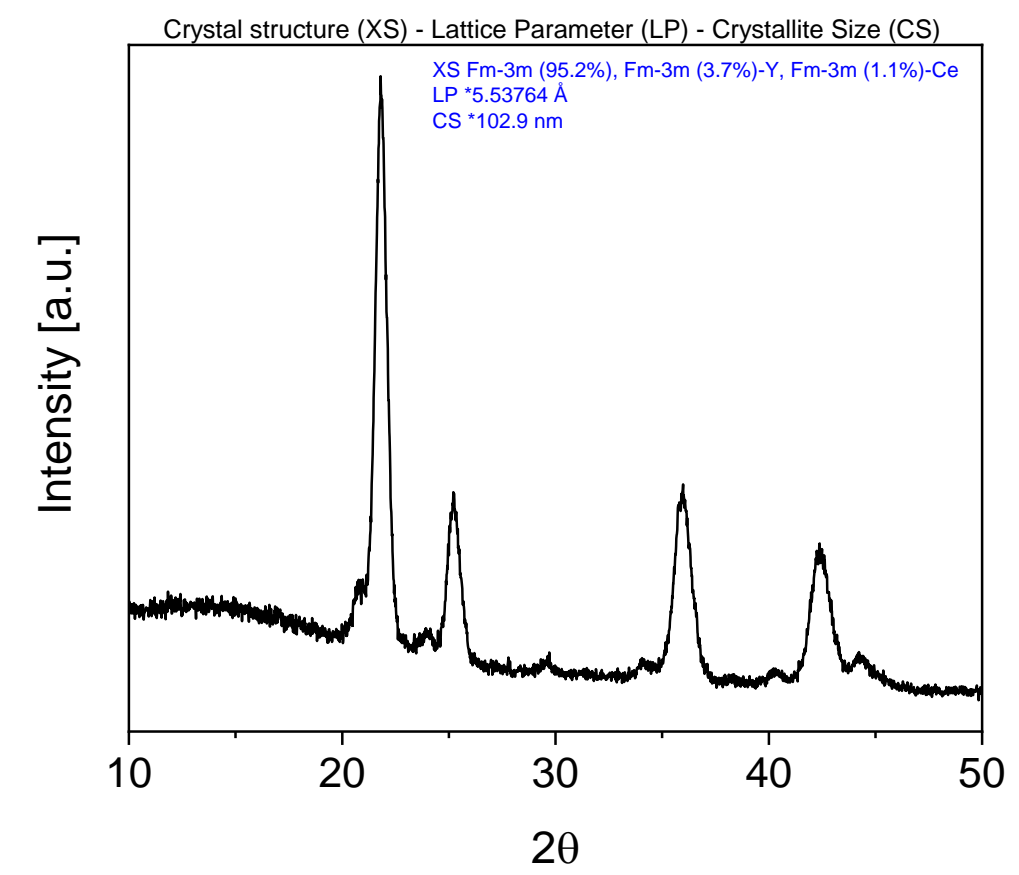
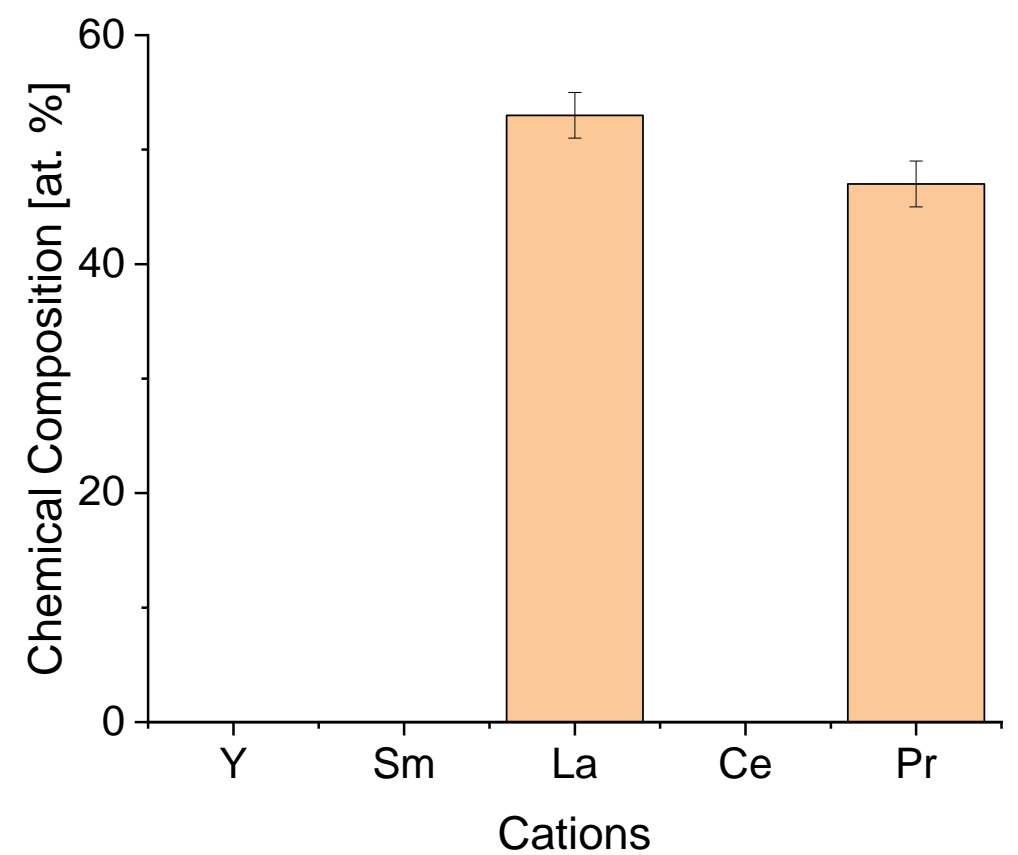
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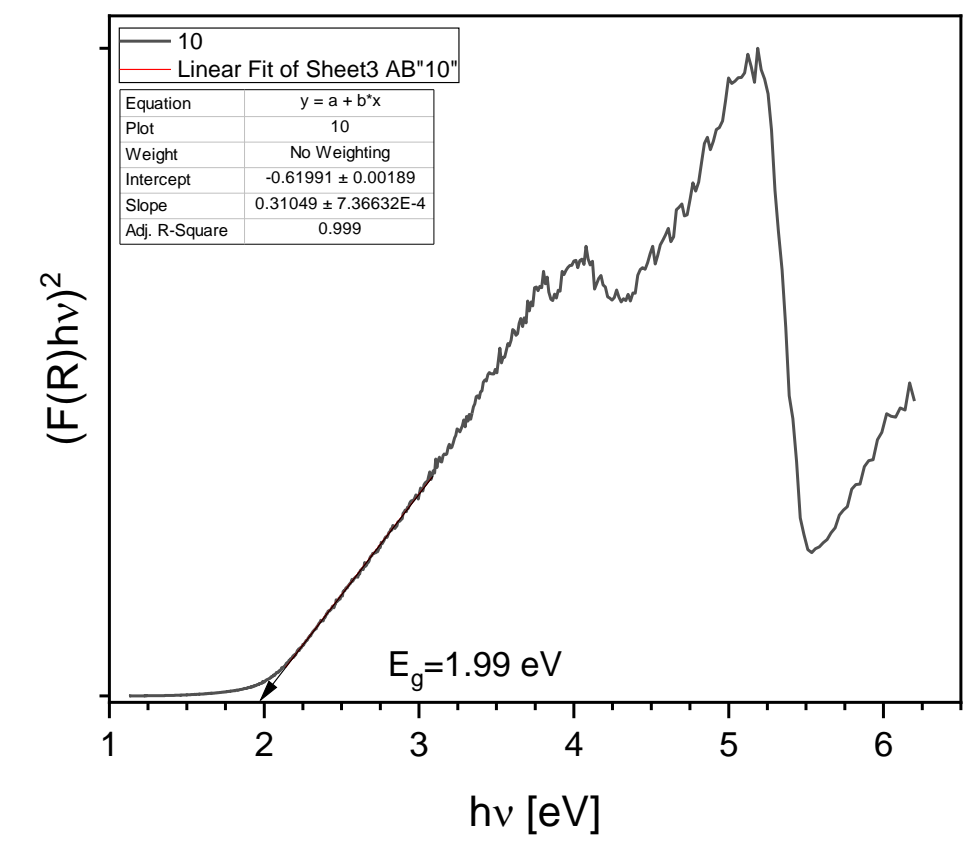
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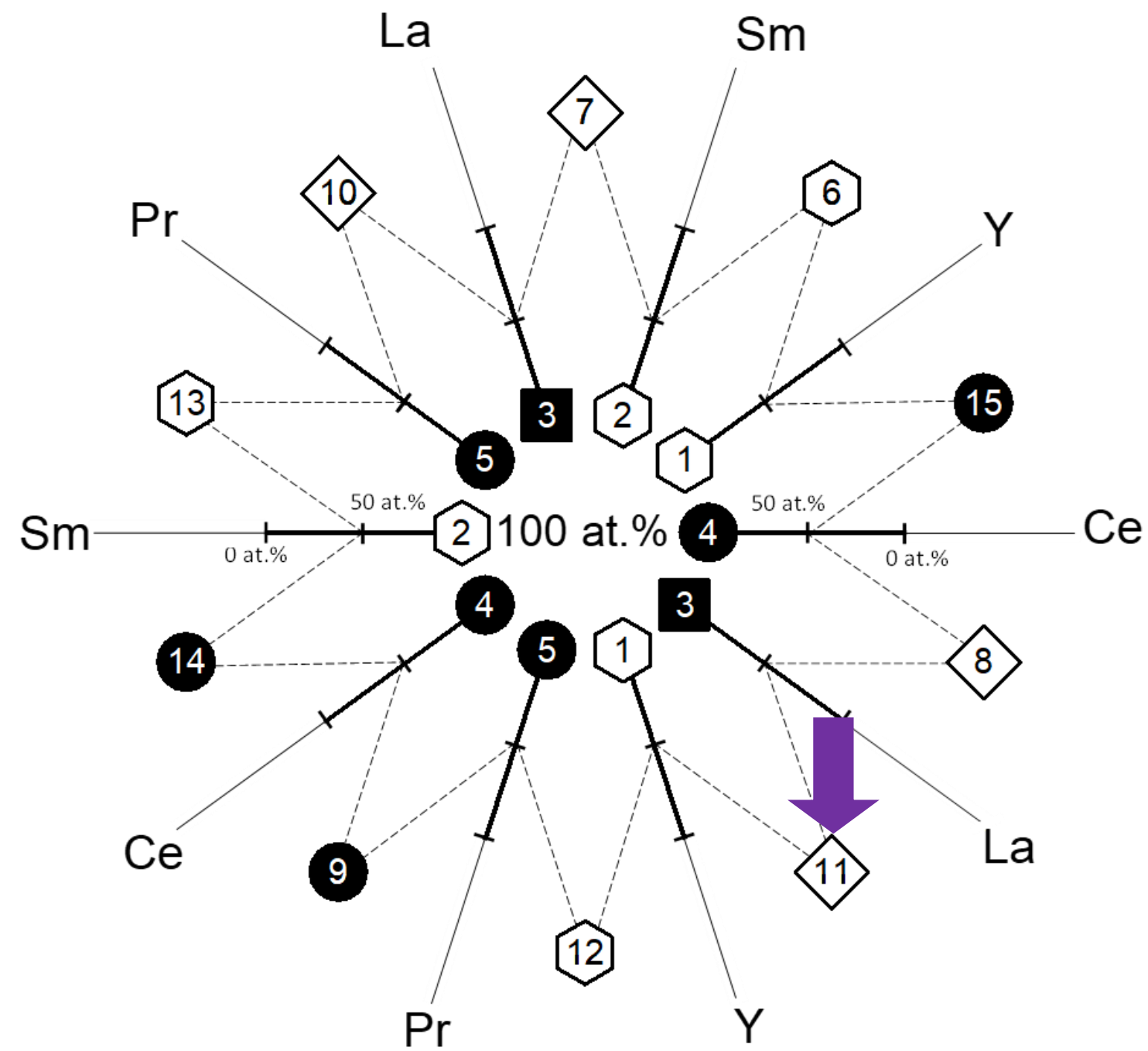
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase



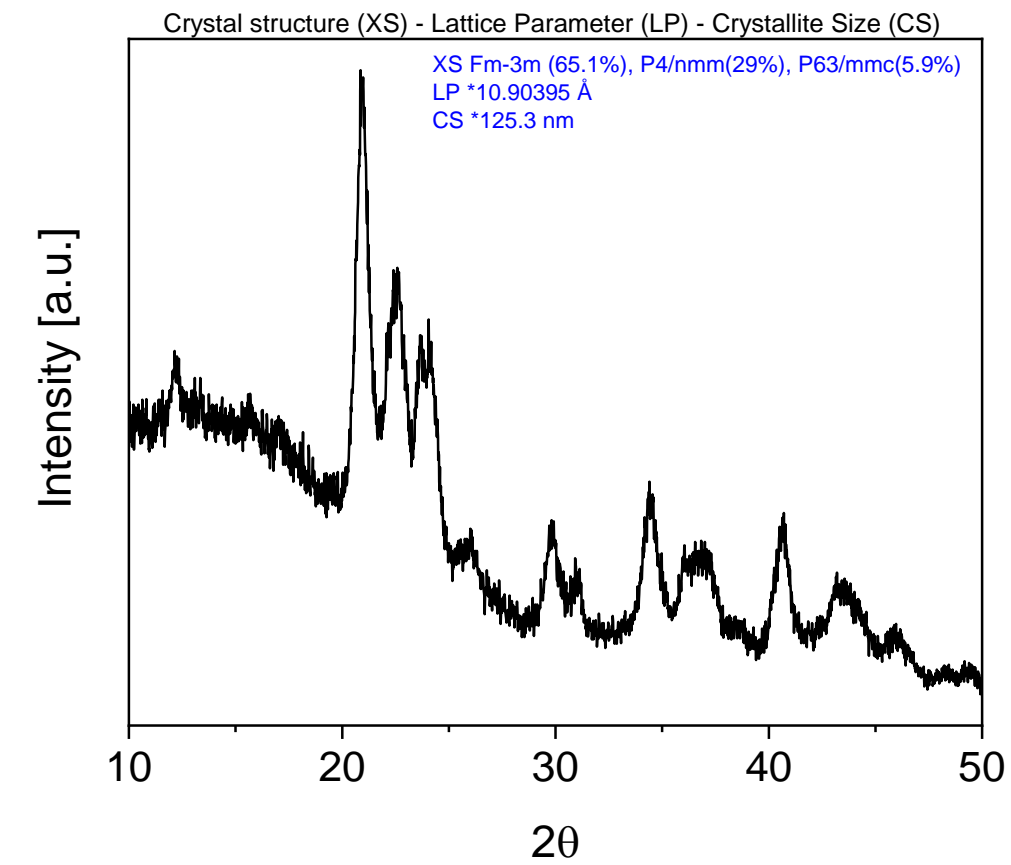
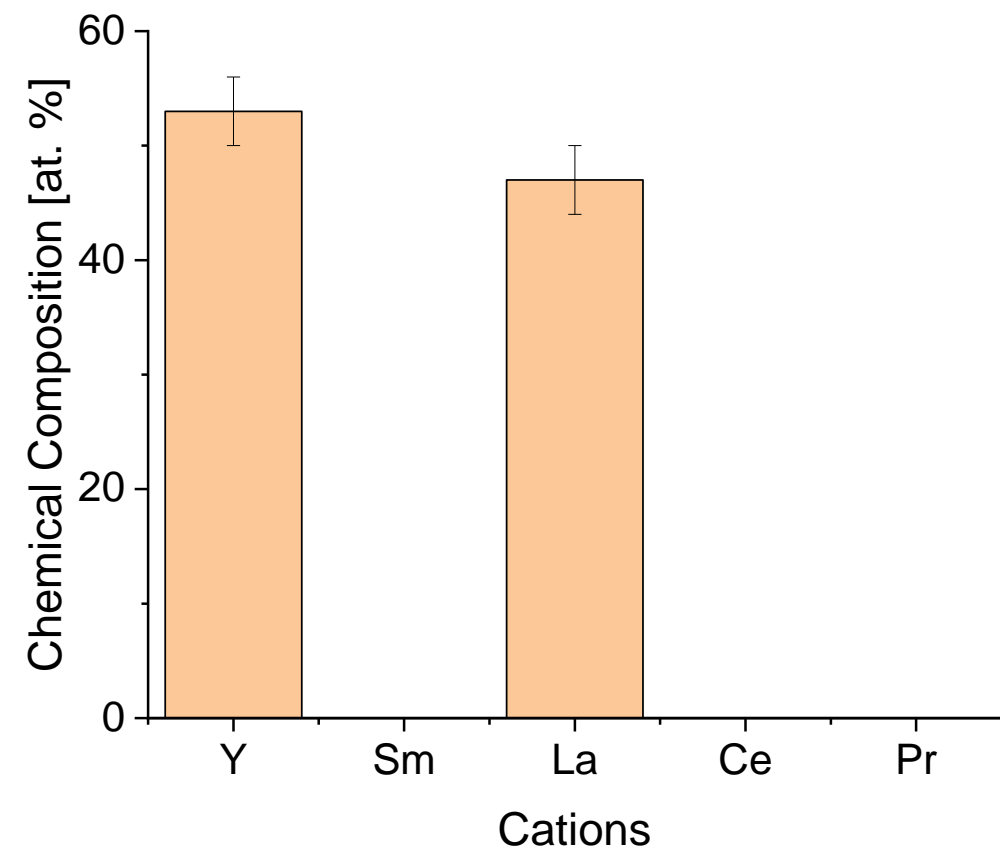
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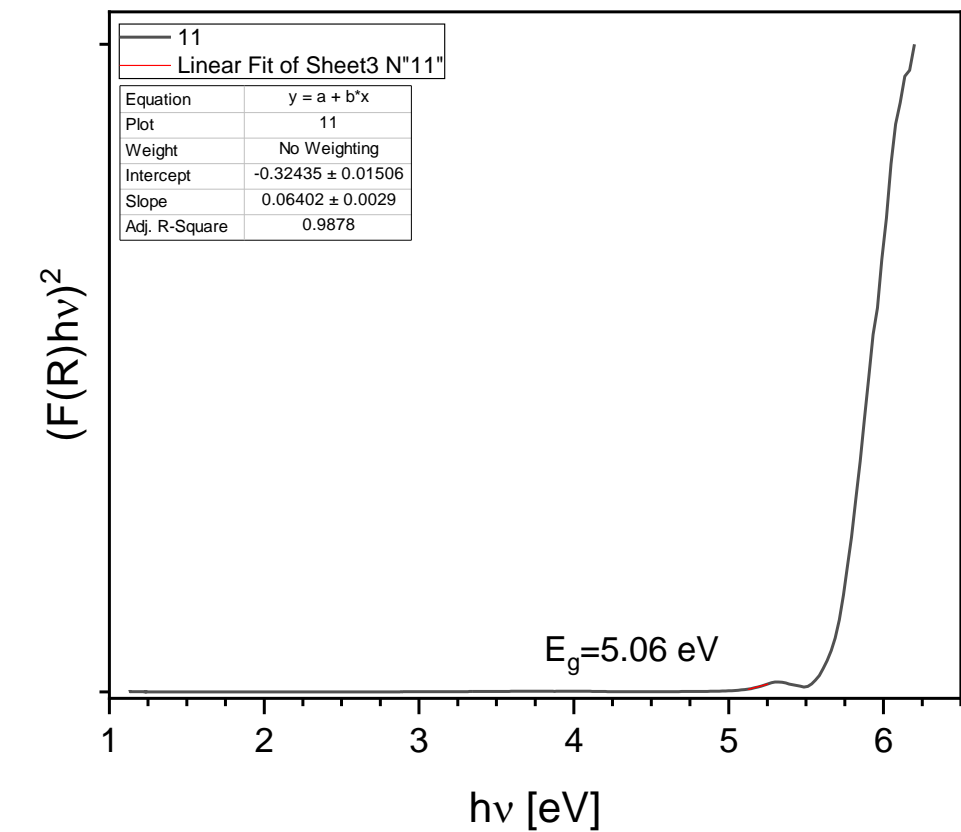
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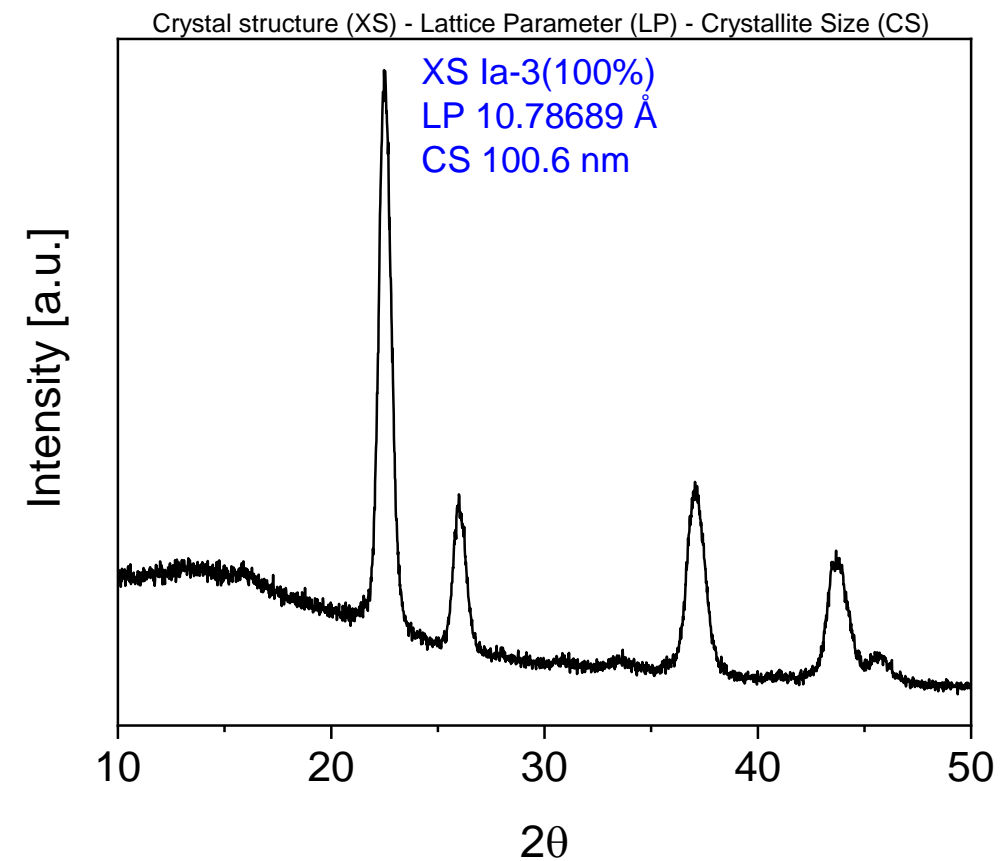
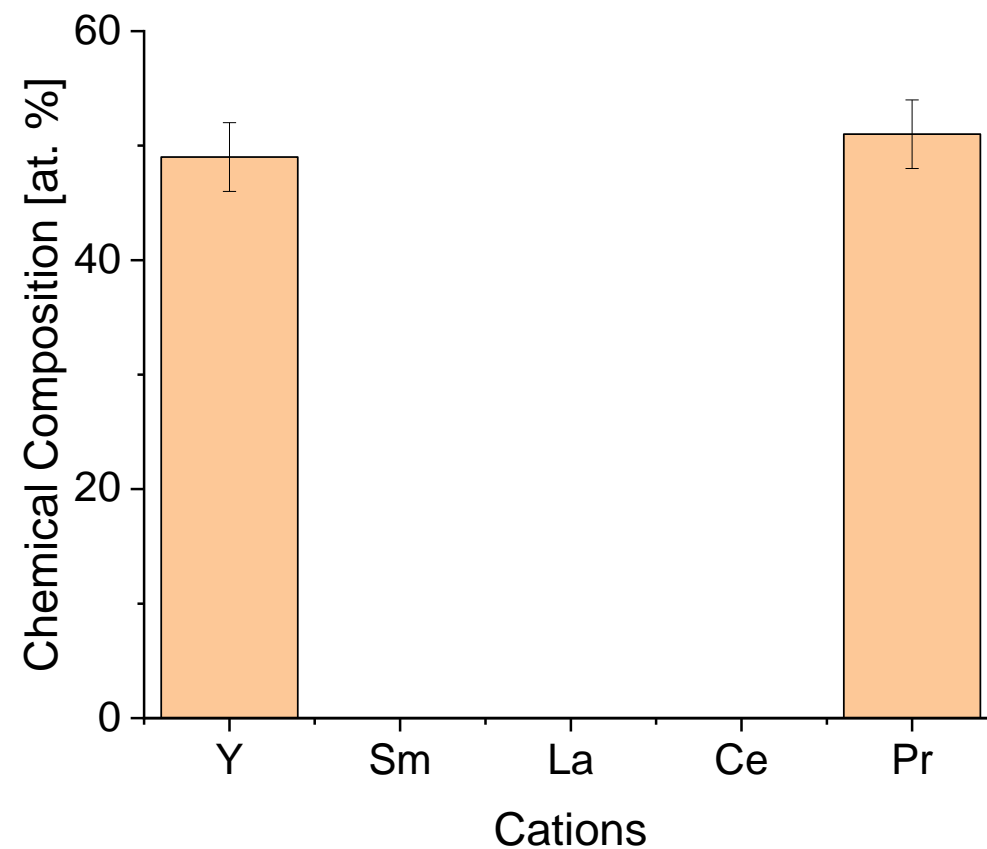
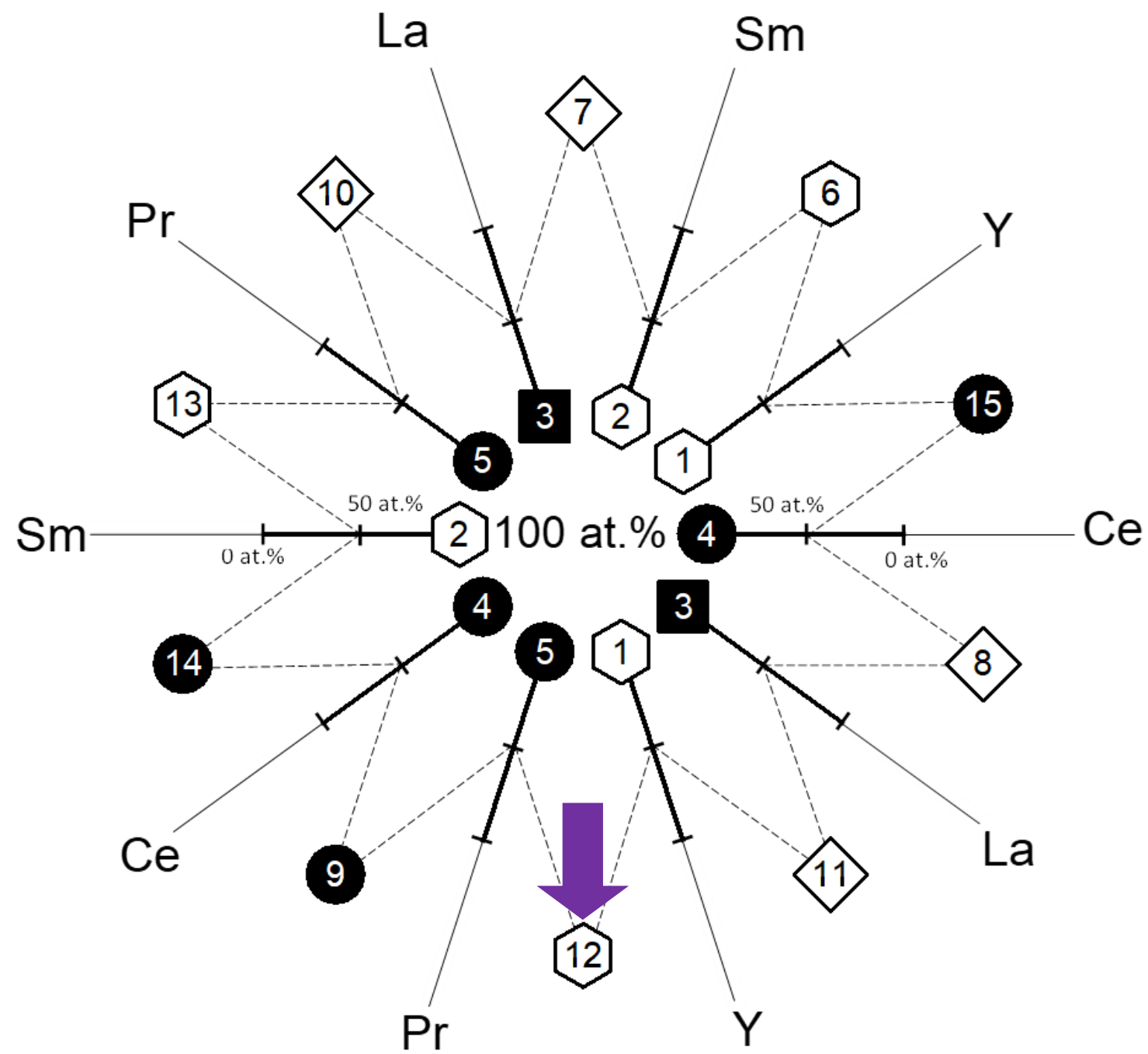
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase



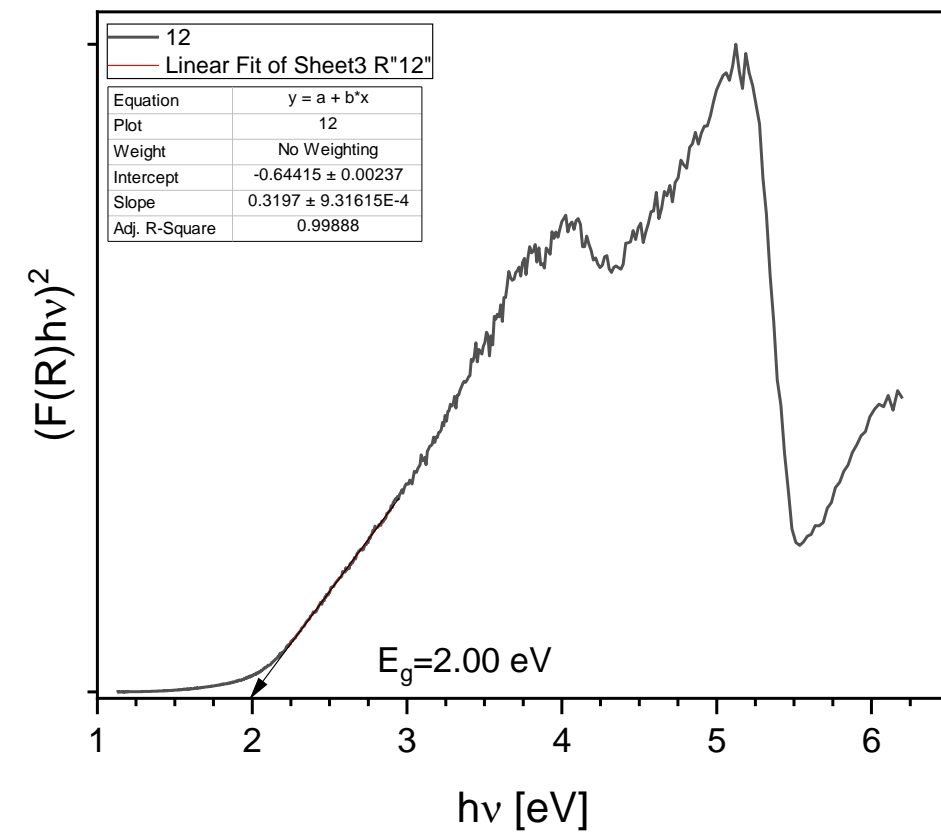
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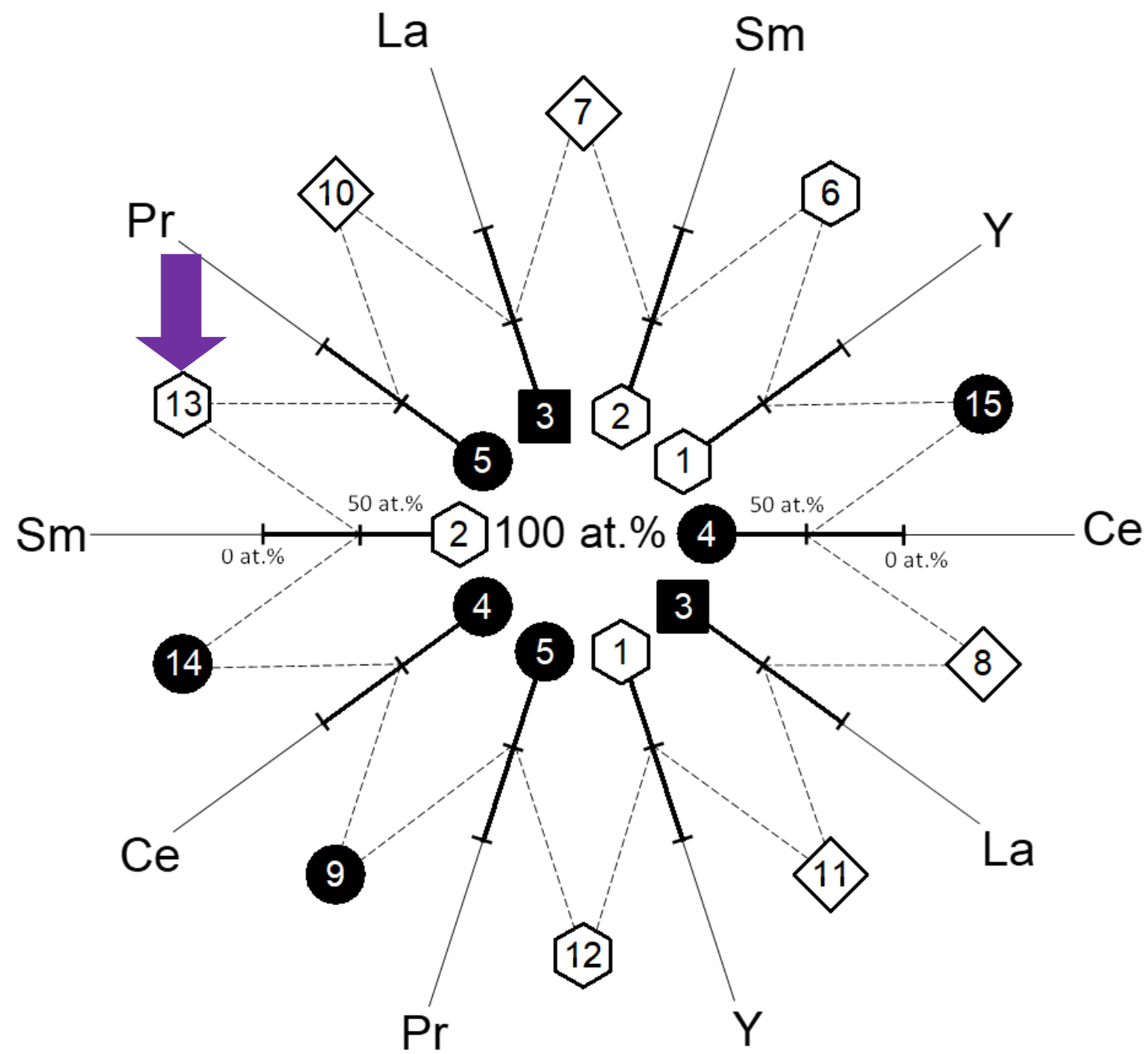


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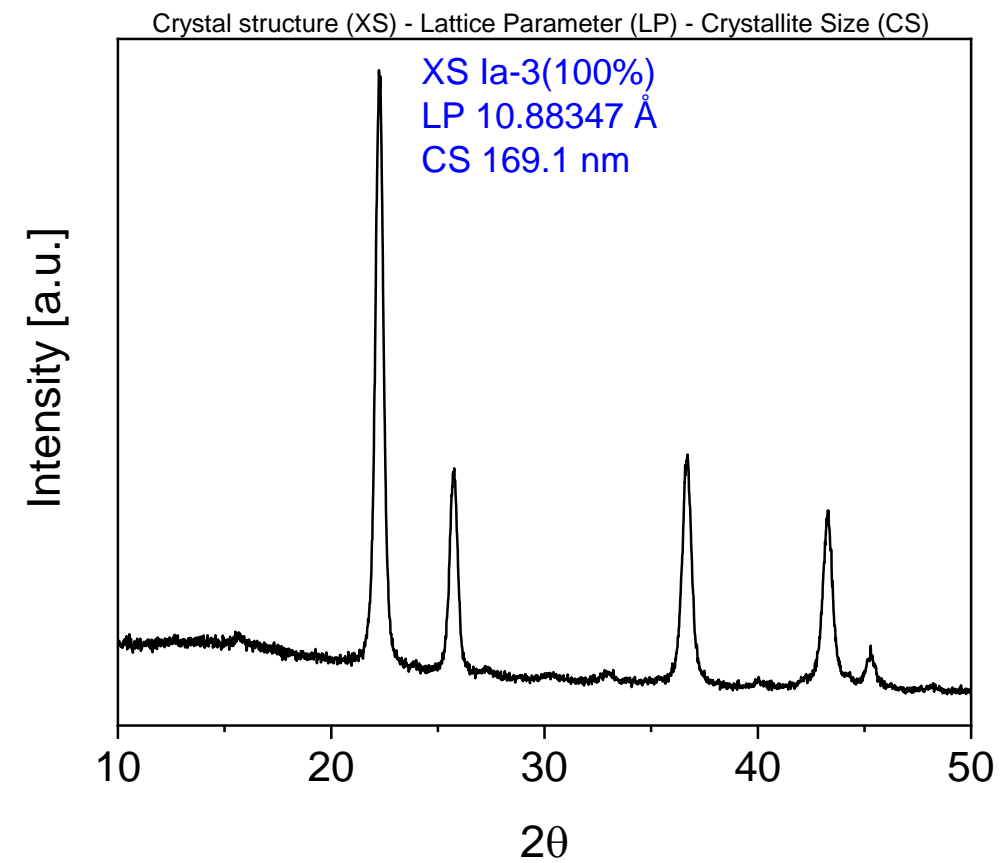
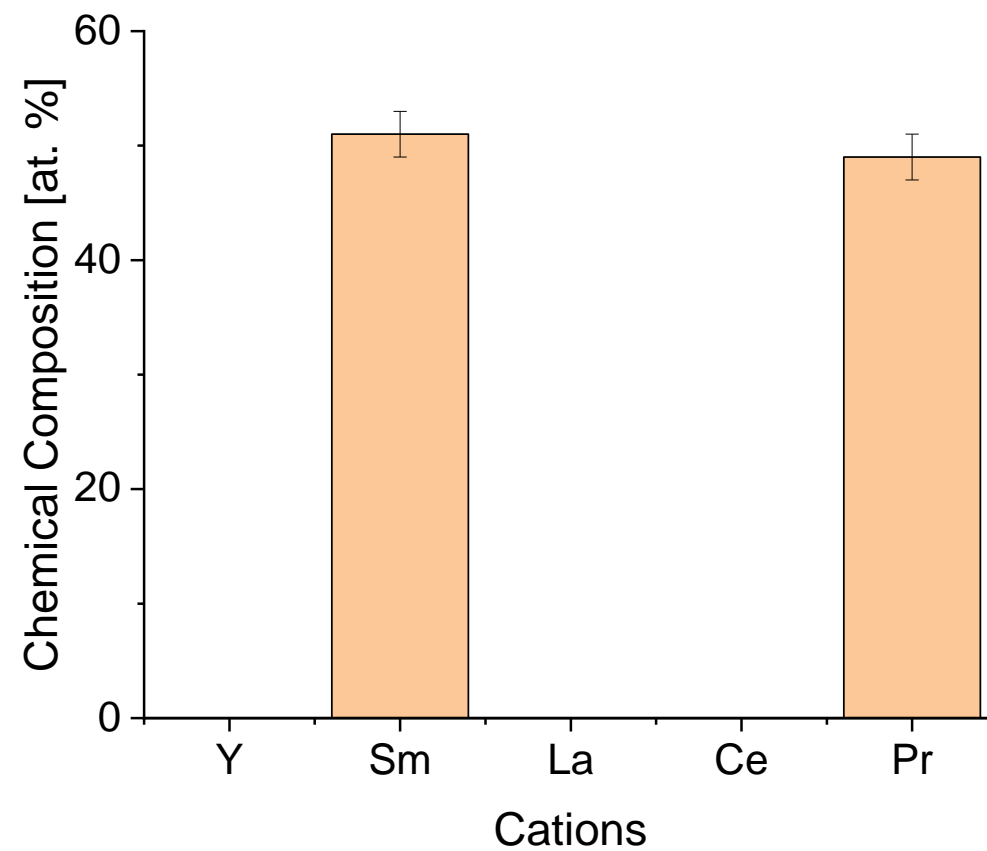


○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase

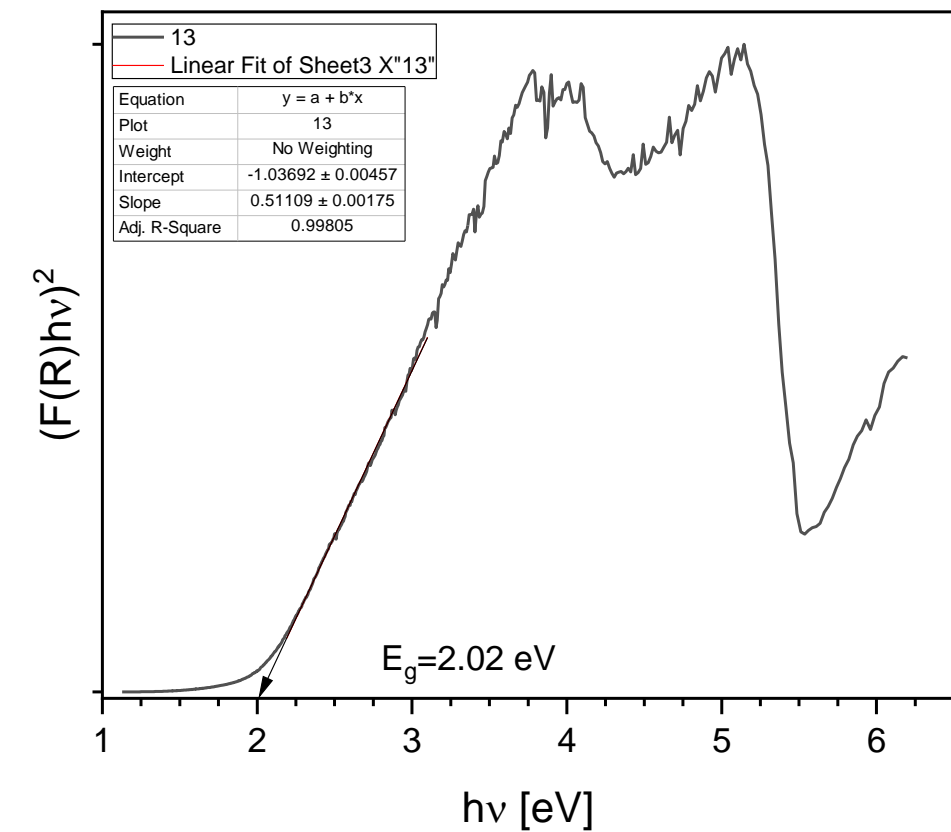
# Sample 13



○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase

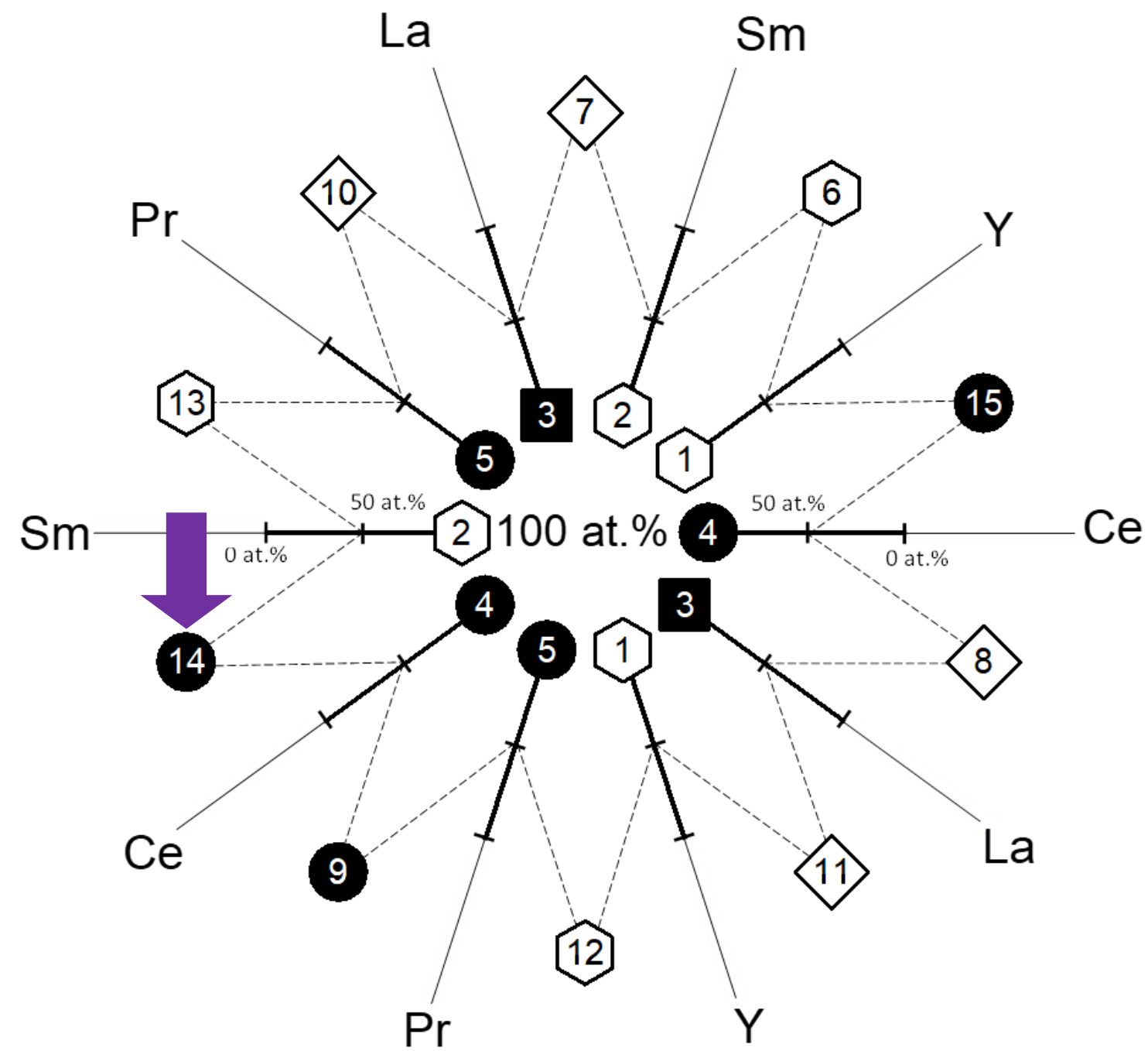


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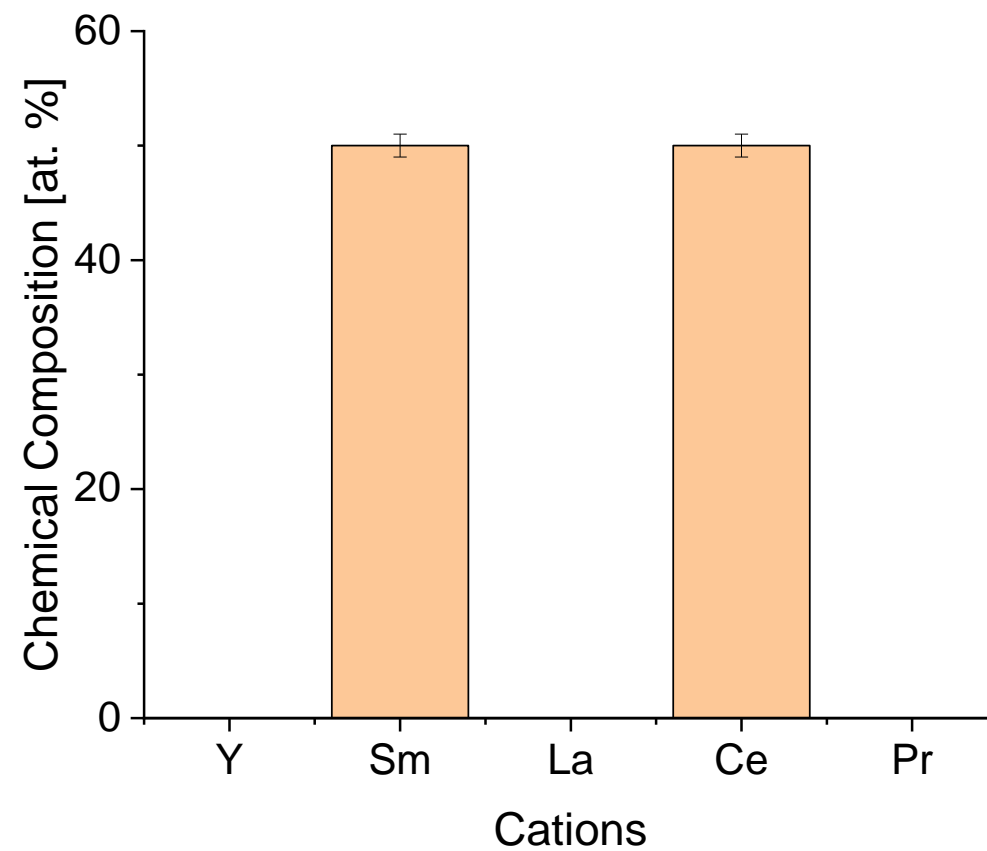




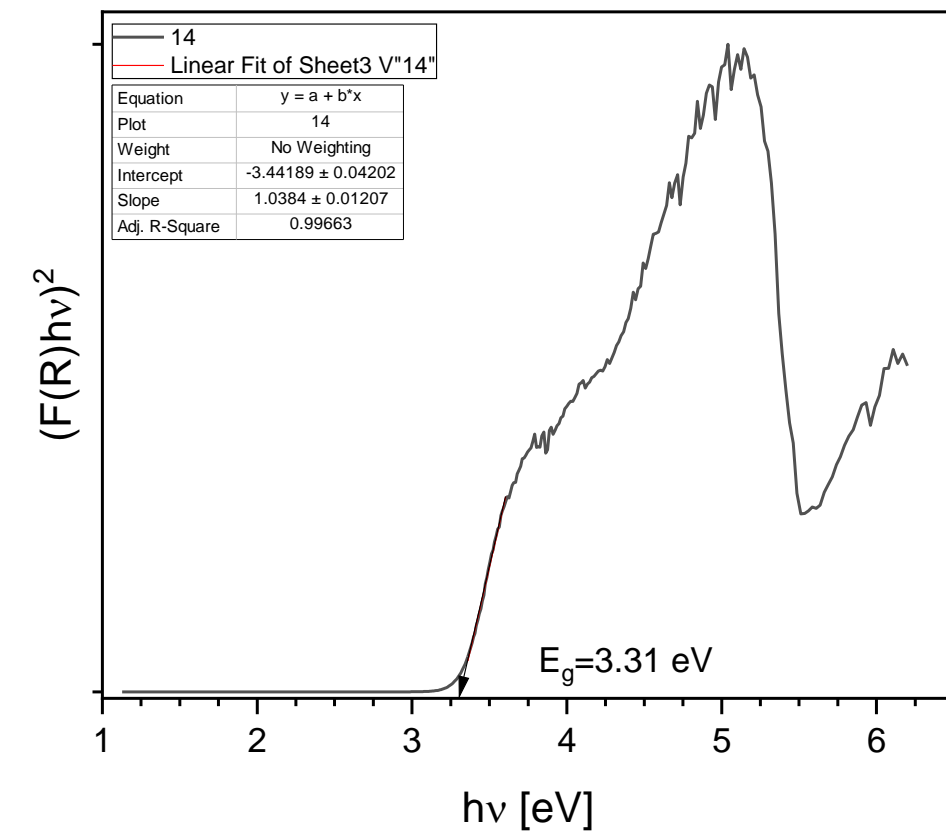
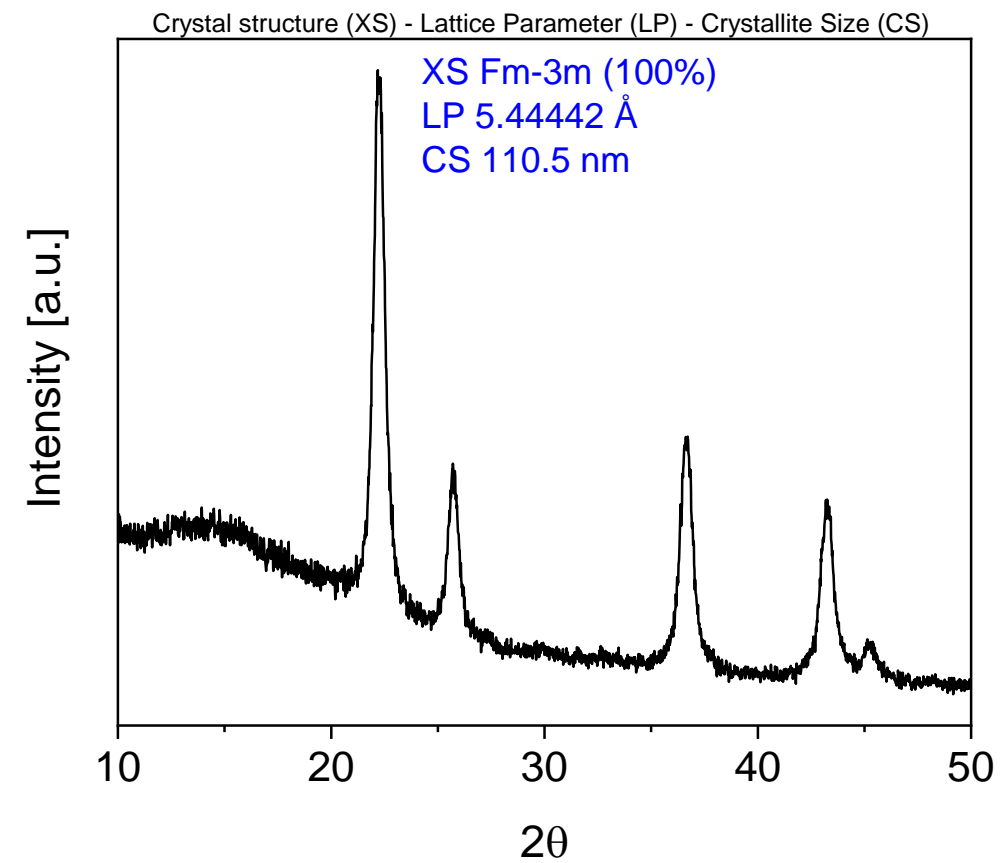
# Sample 14



○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase

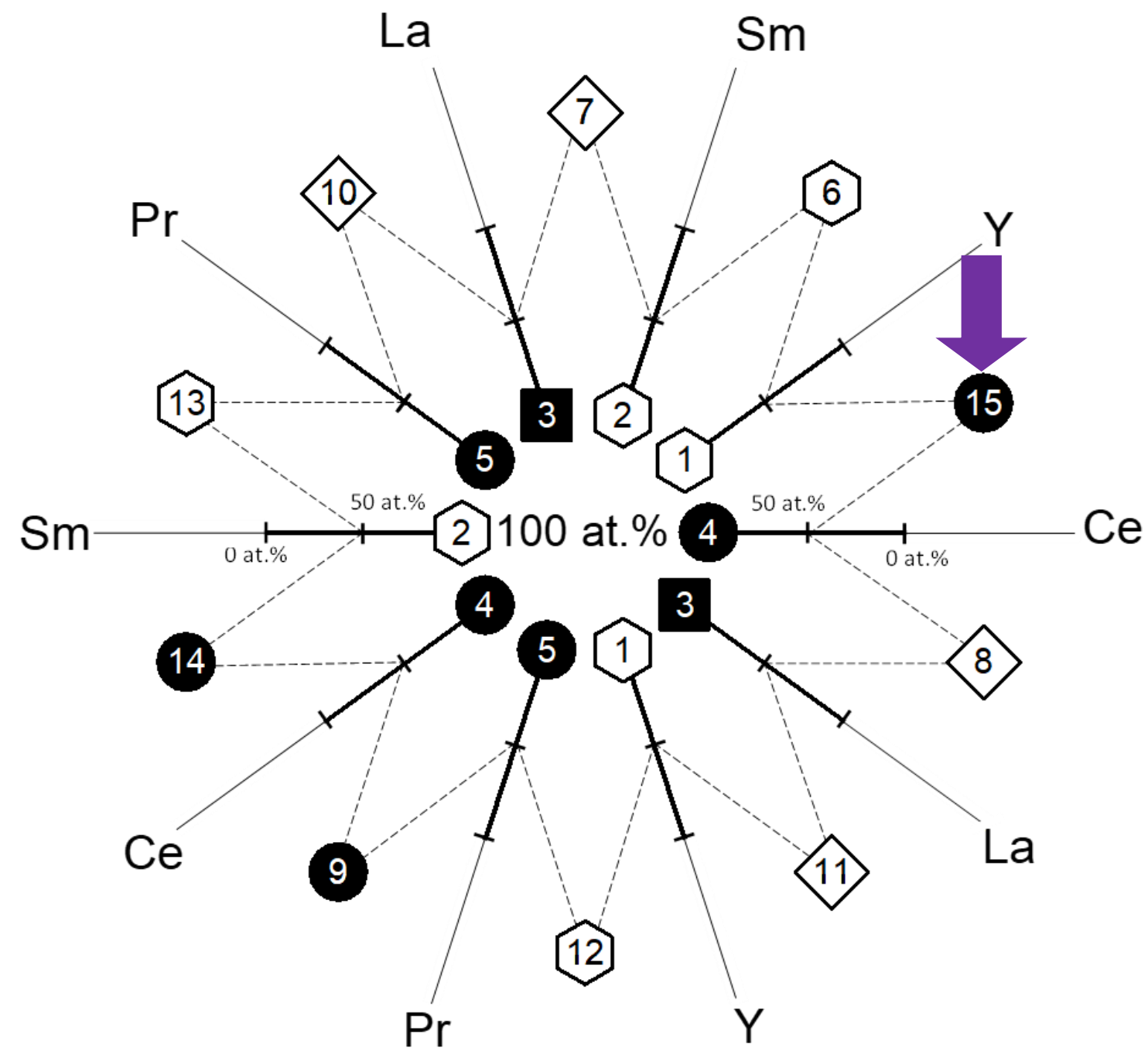


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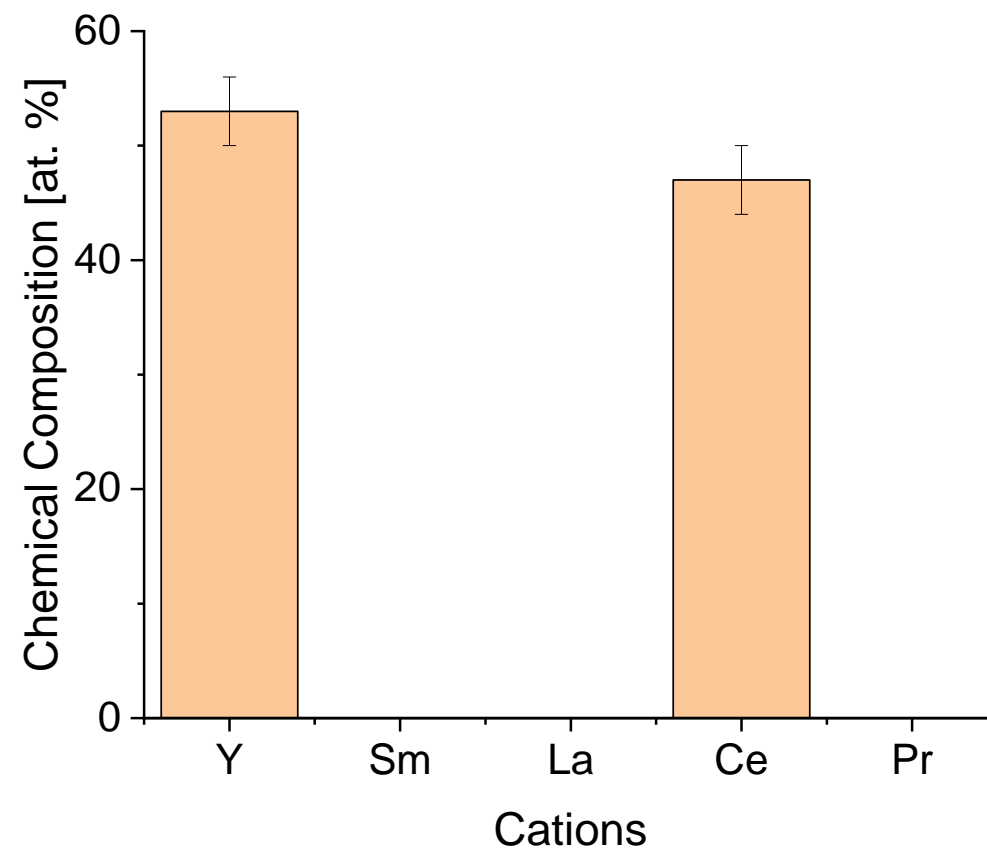




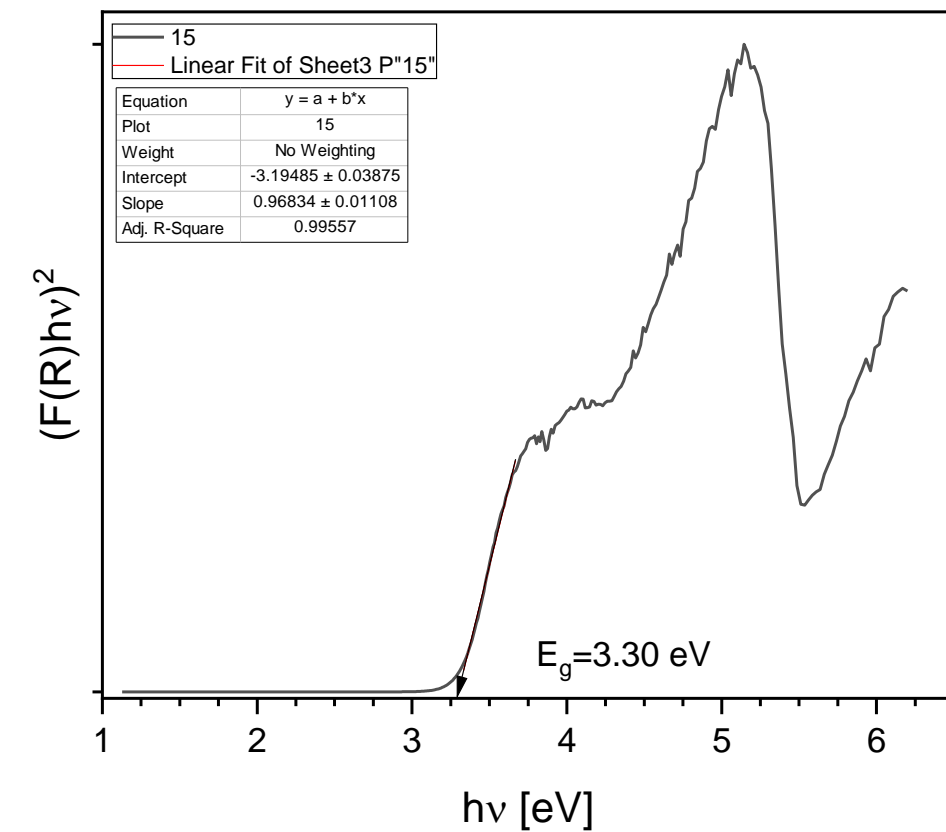
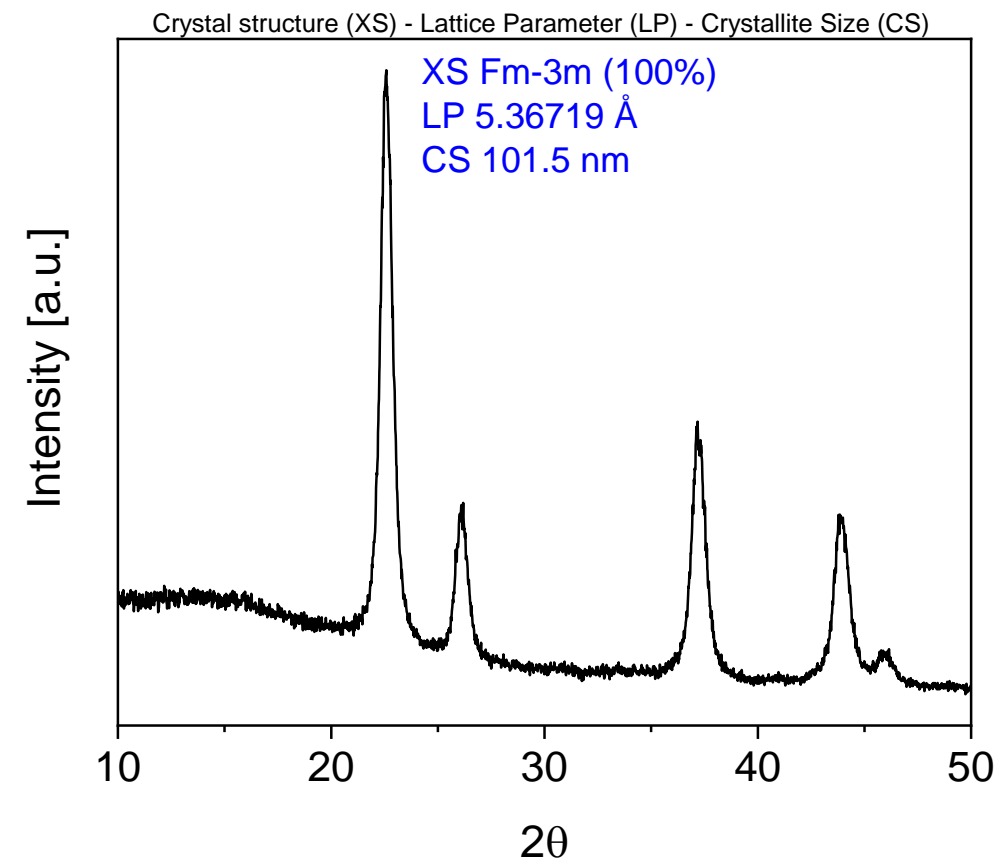
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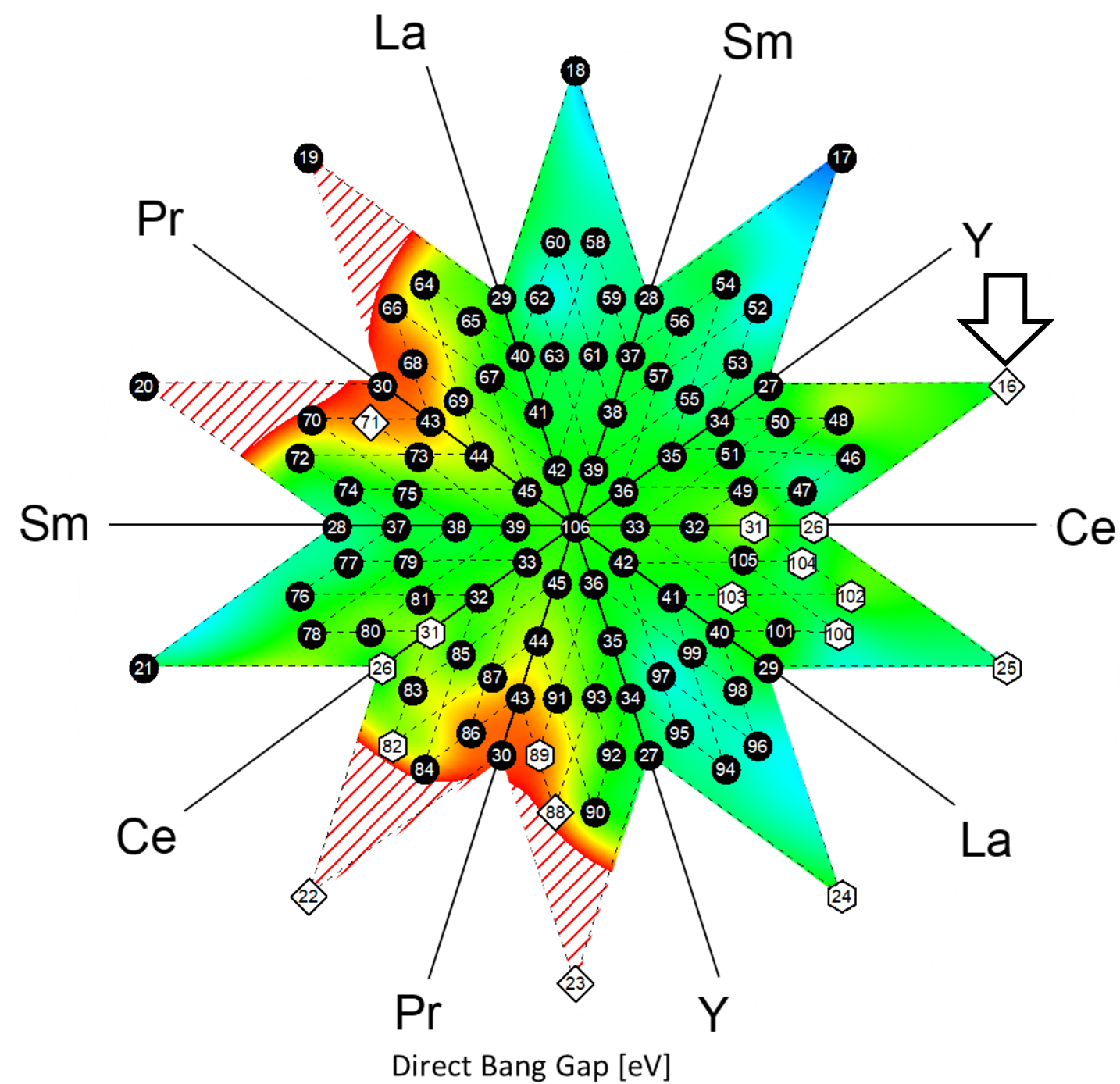
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ■ Single phase  $P63/m$  ◇ Multiple Phase



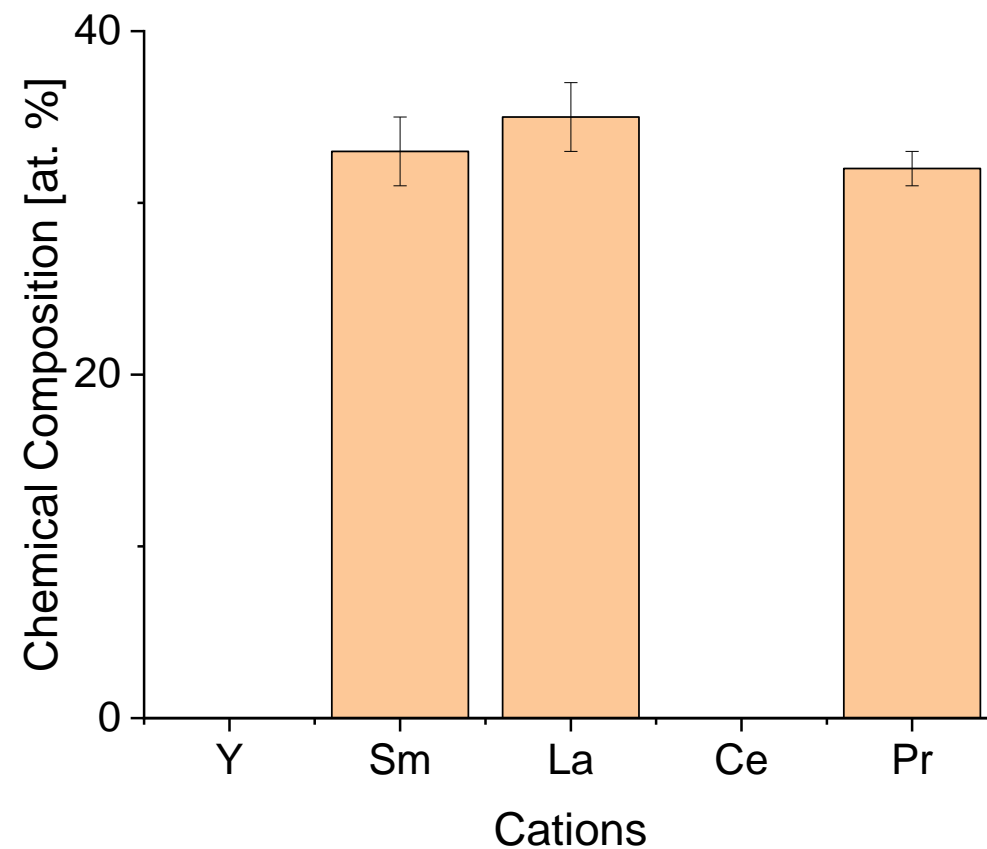
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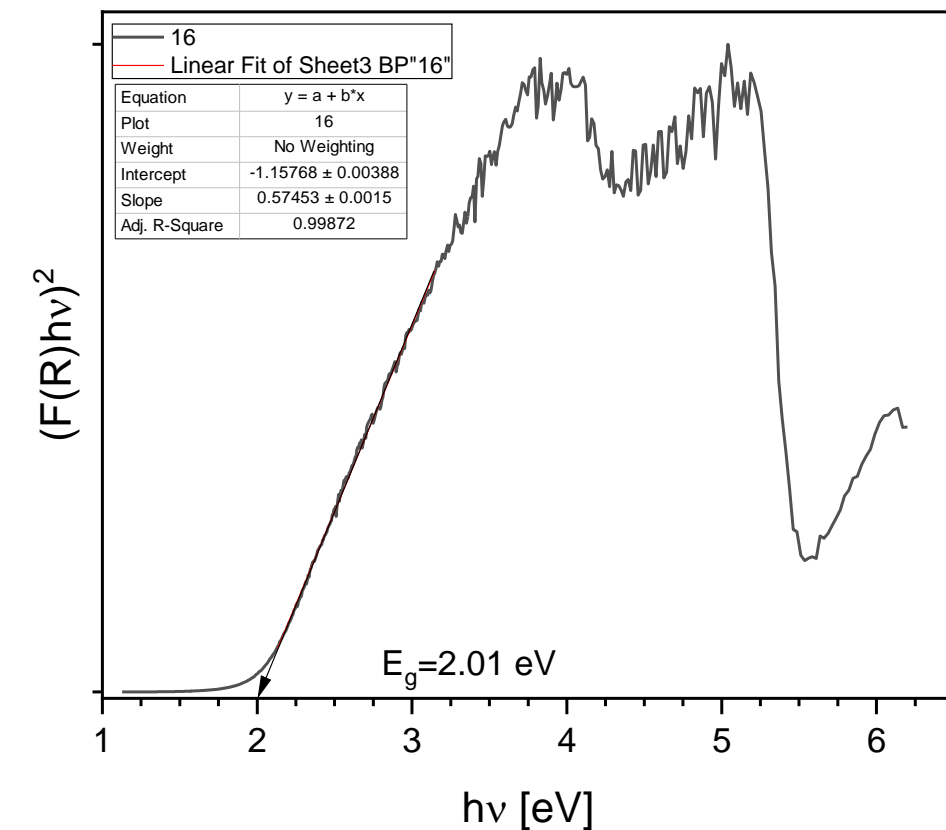
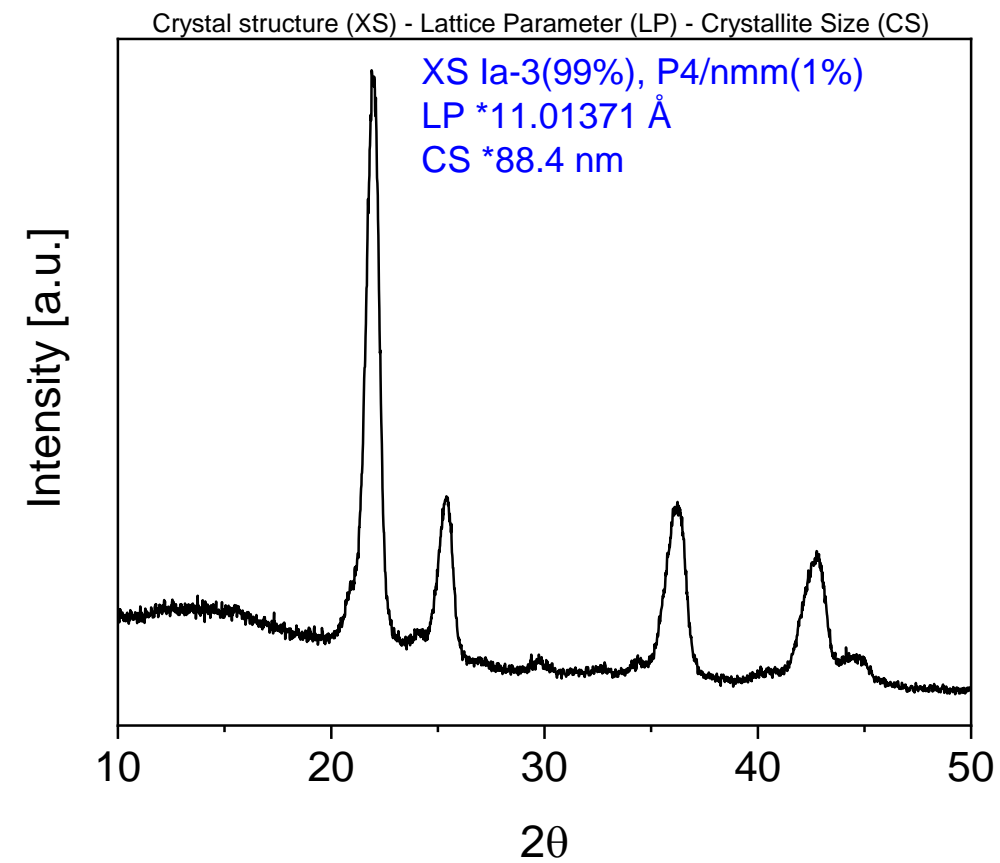
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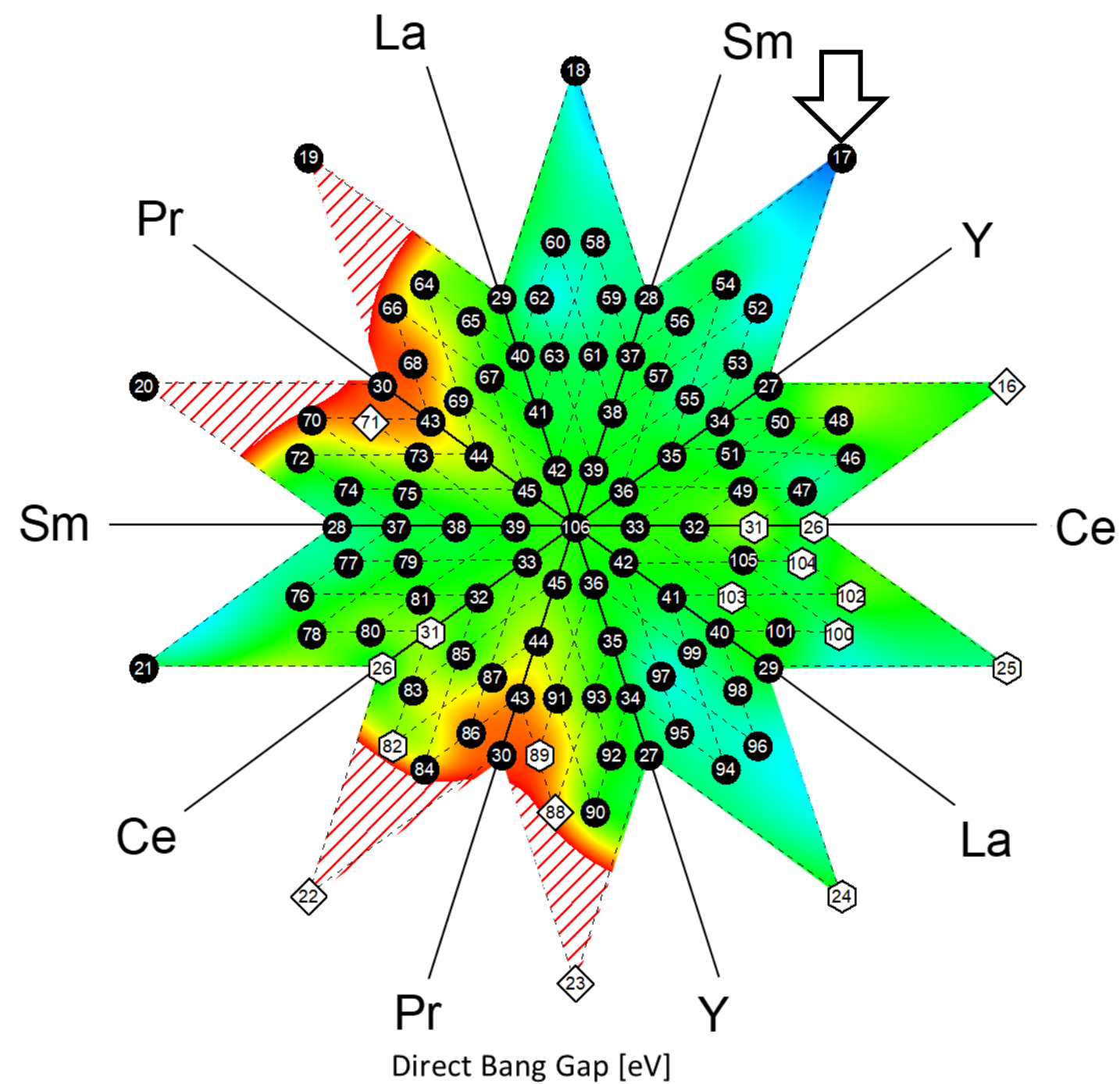
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



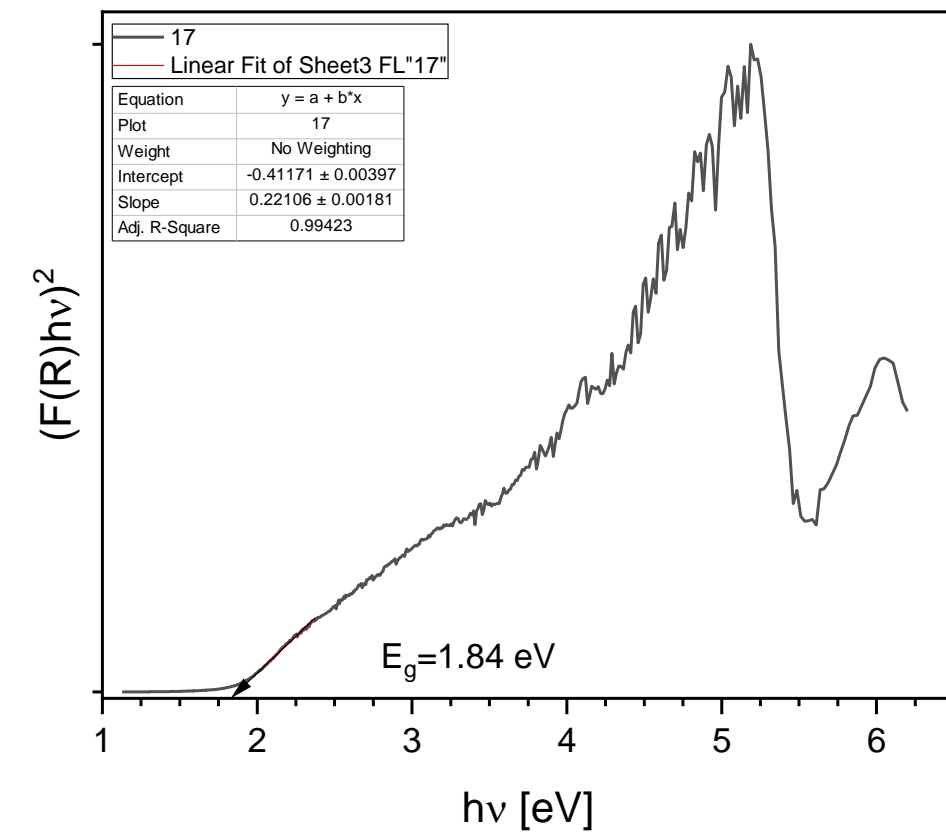
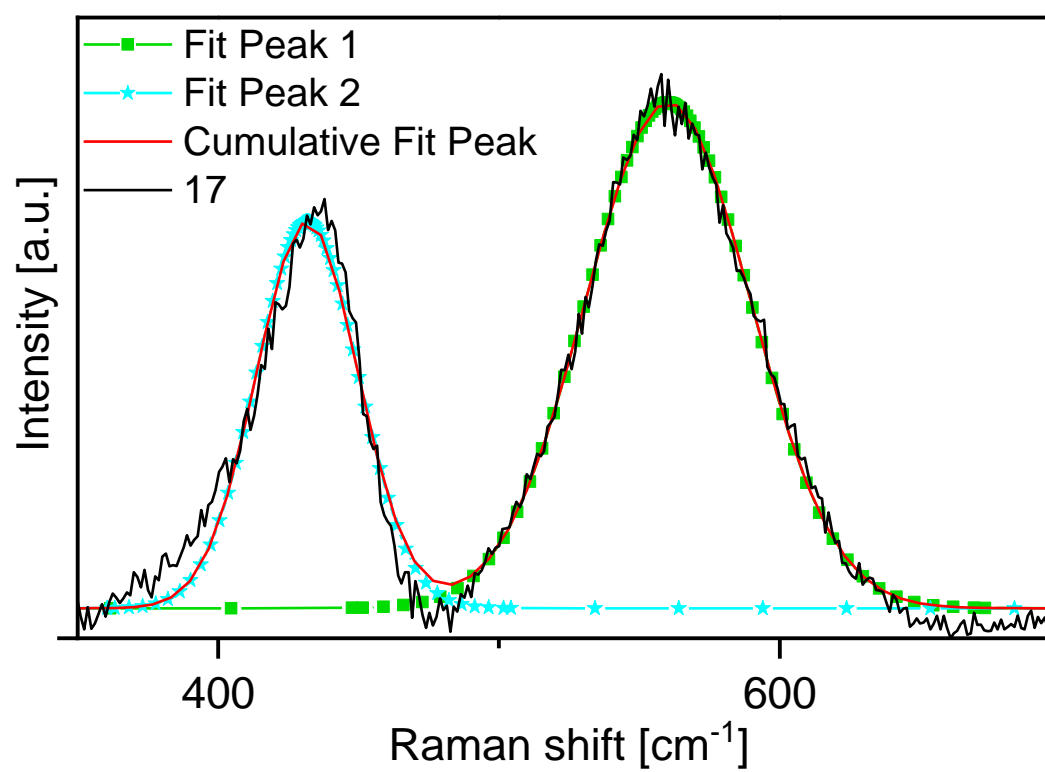
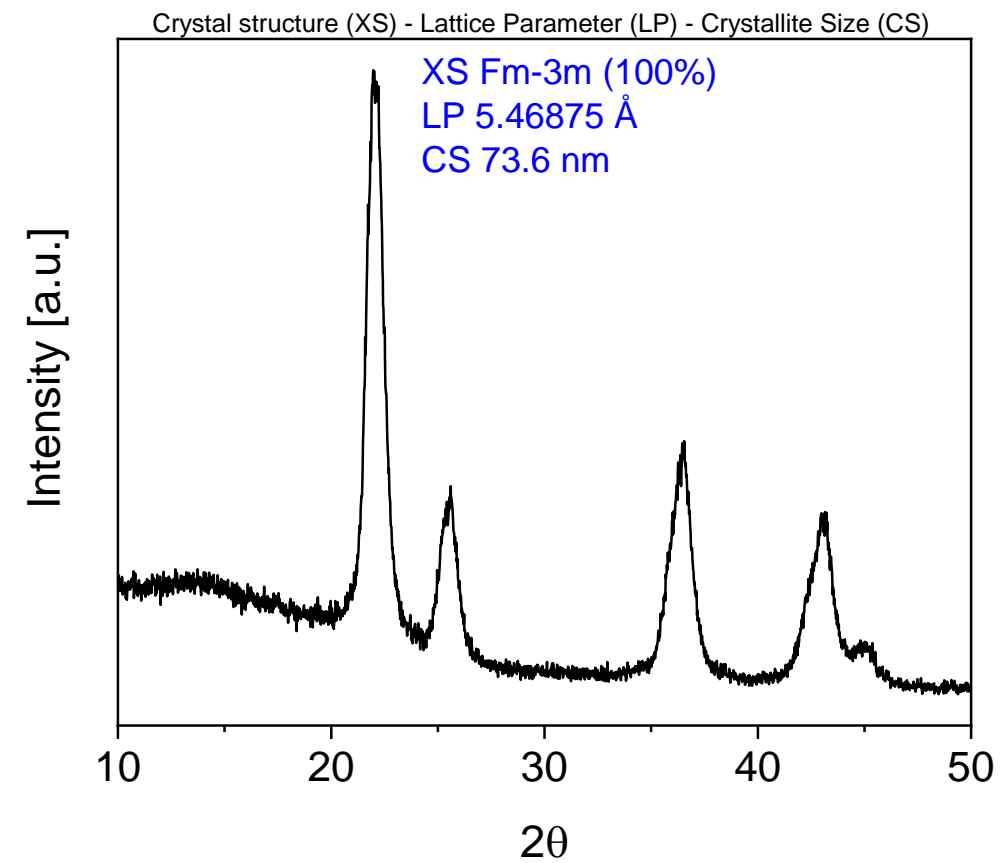
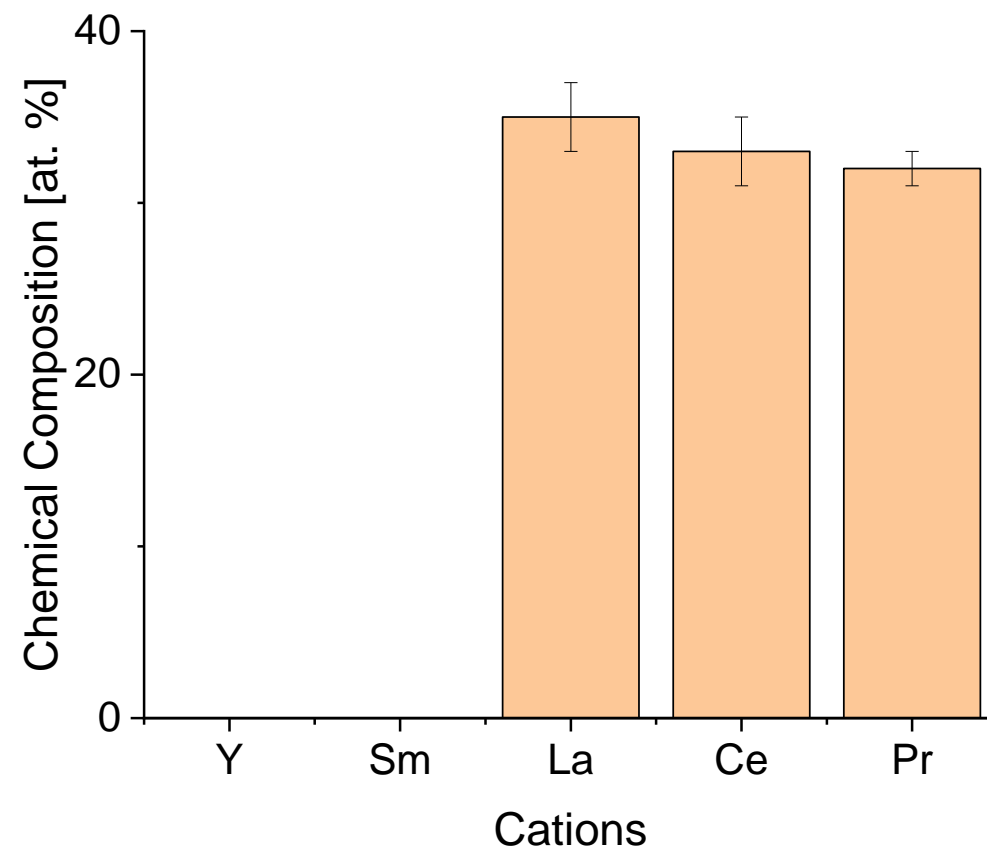
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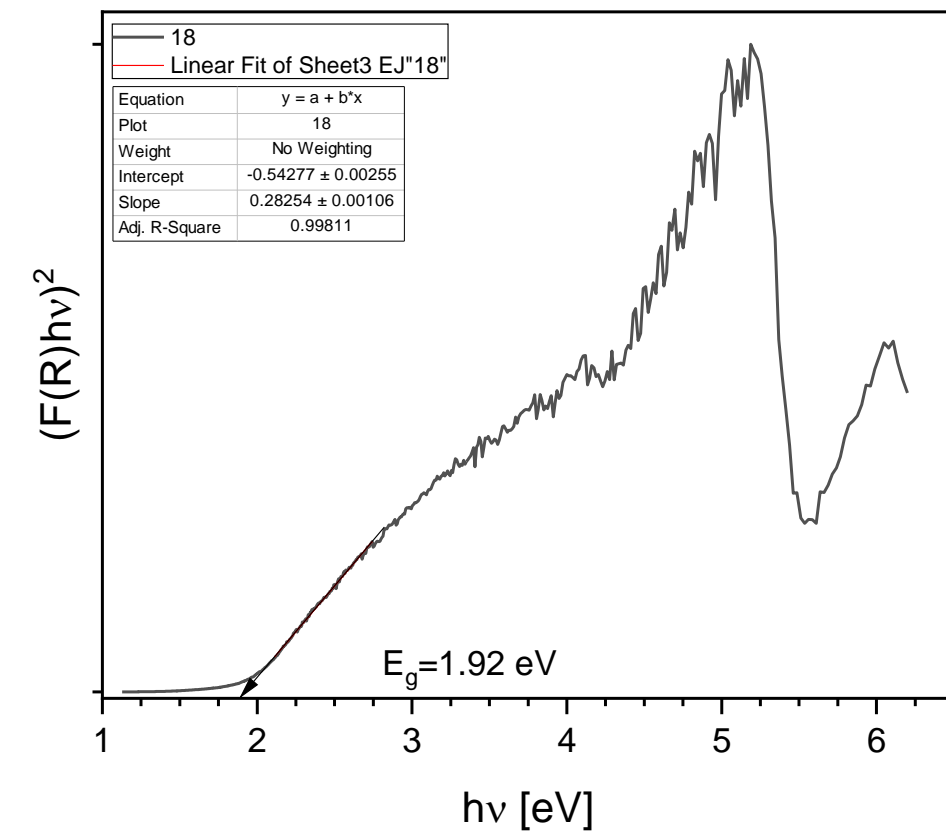
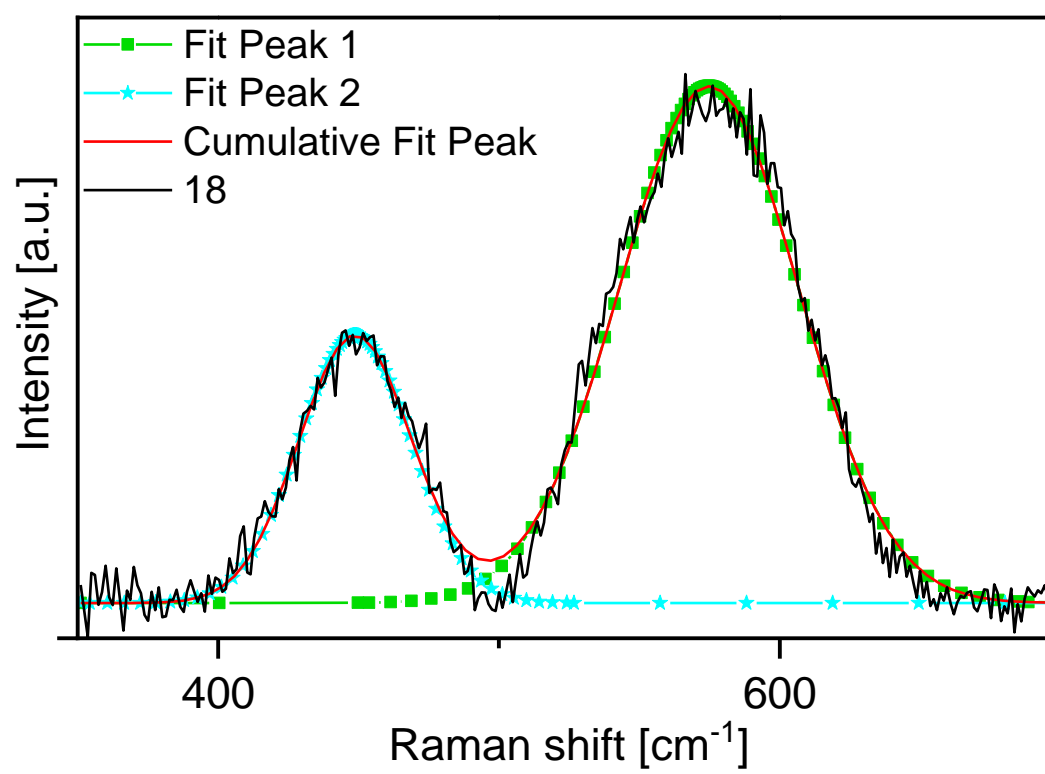
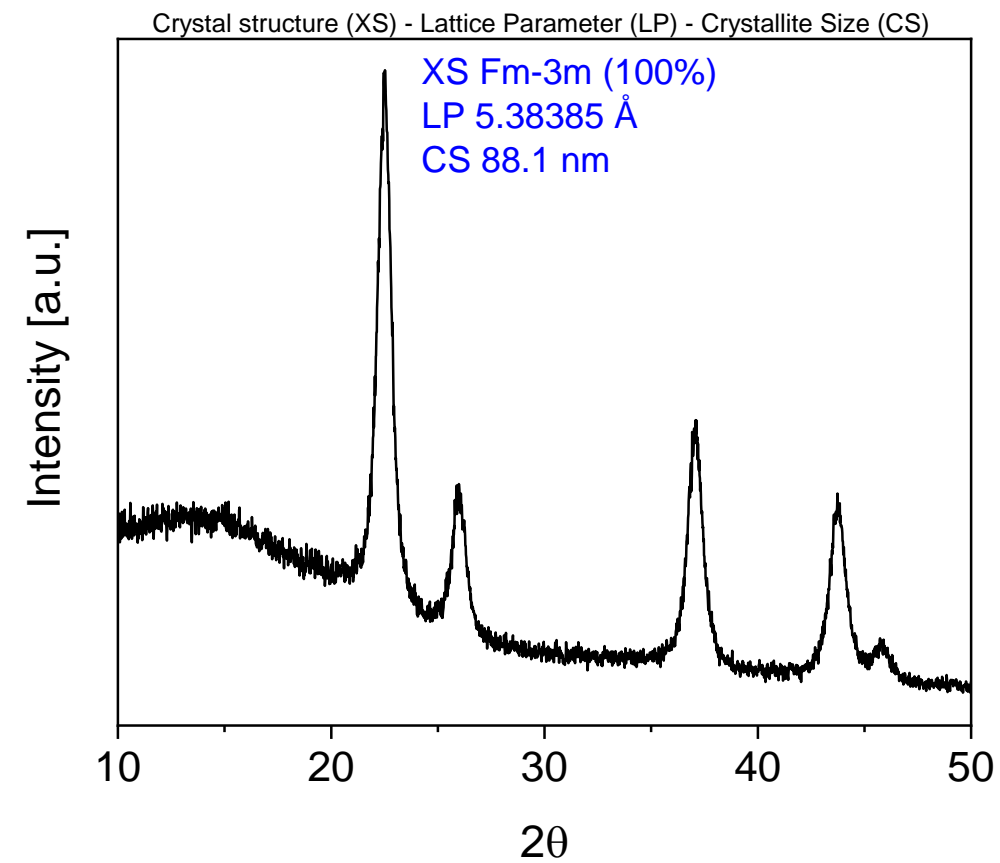
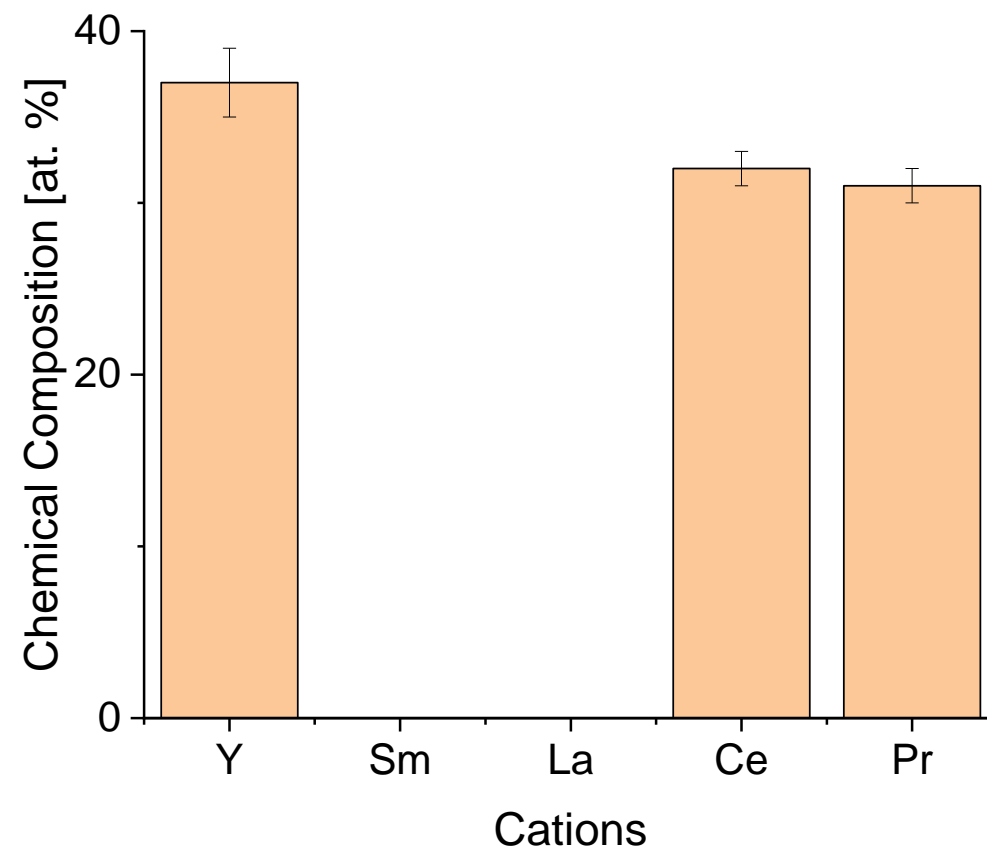
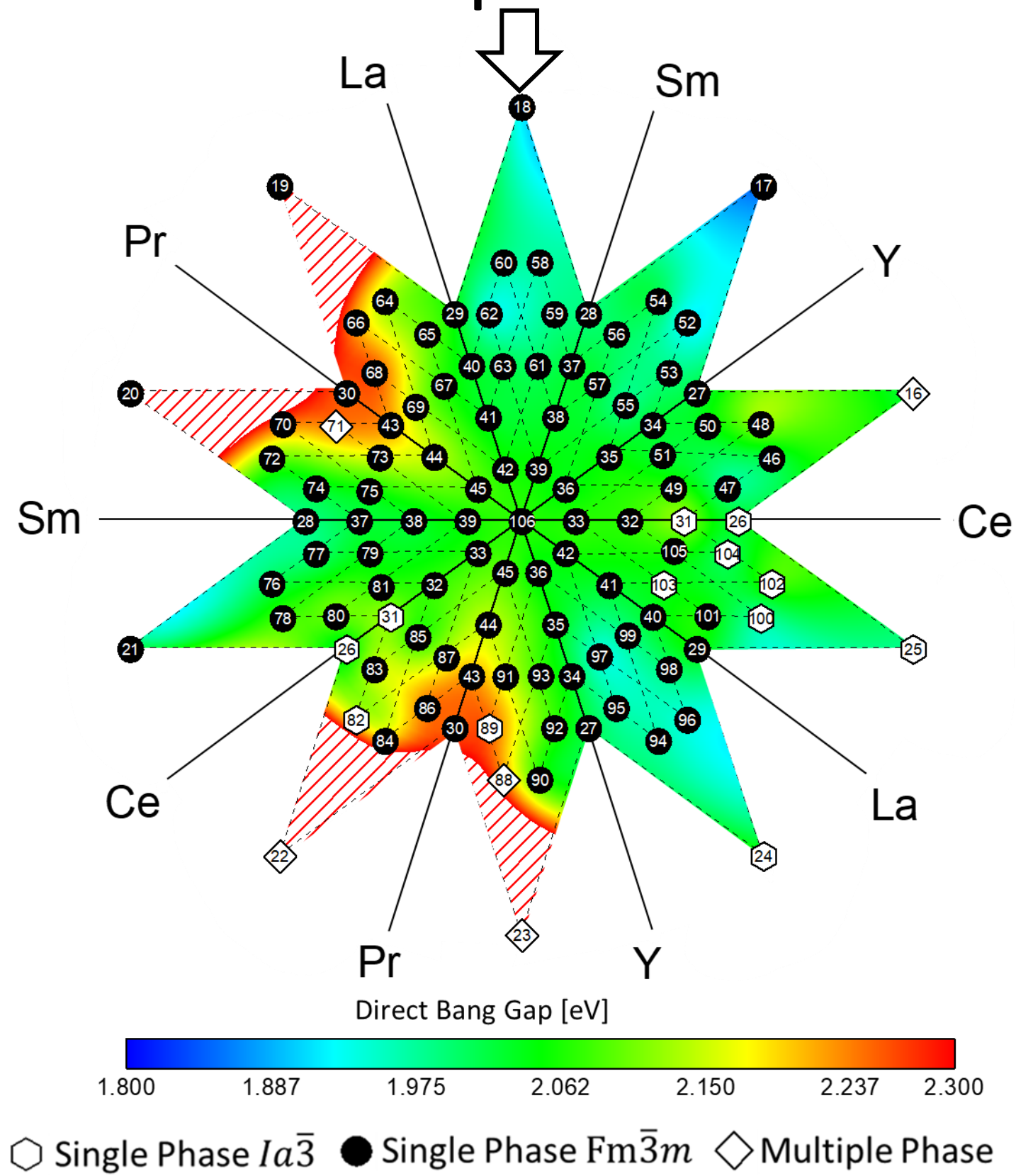
# Sample 17



◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

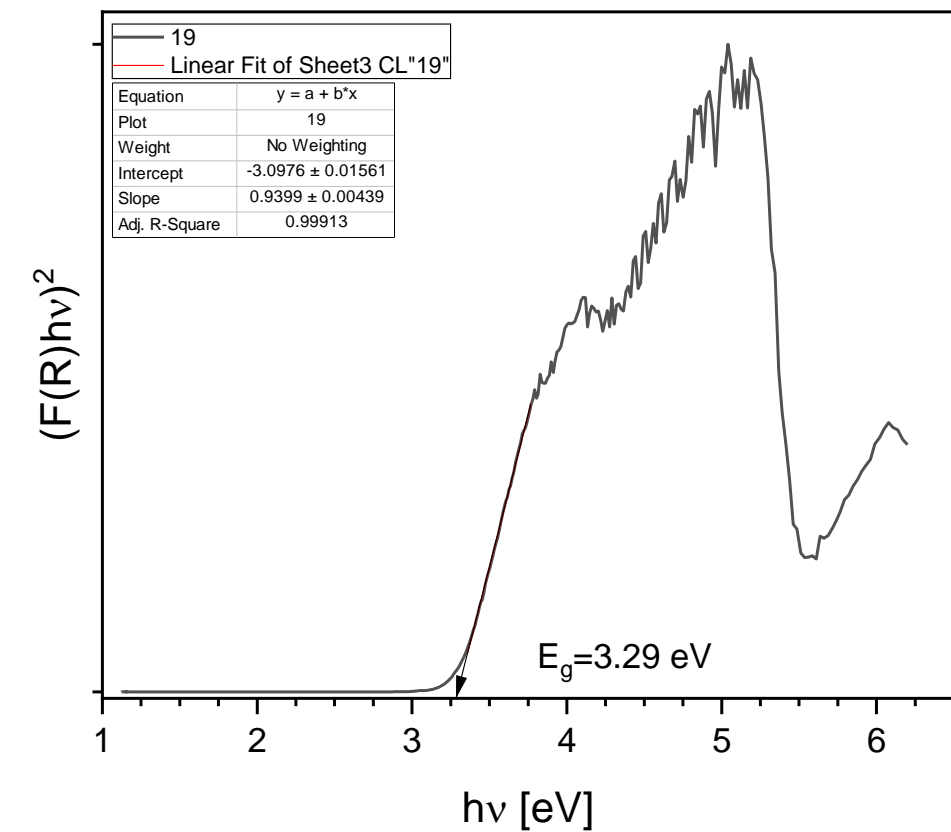
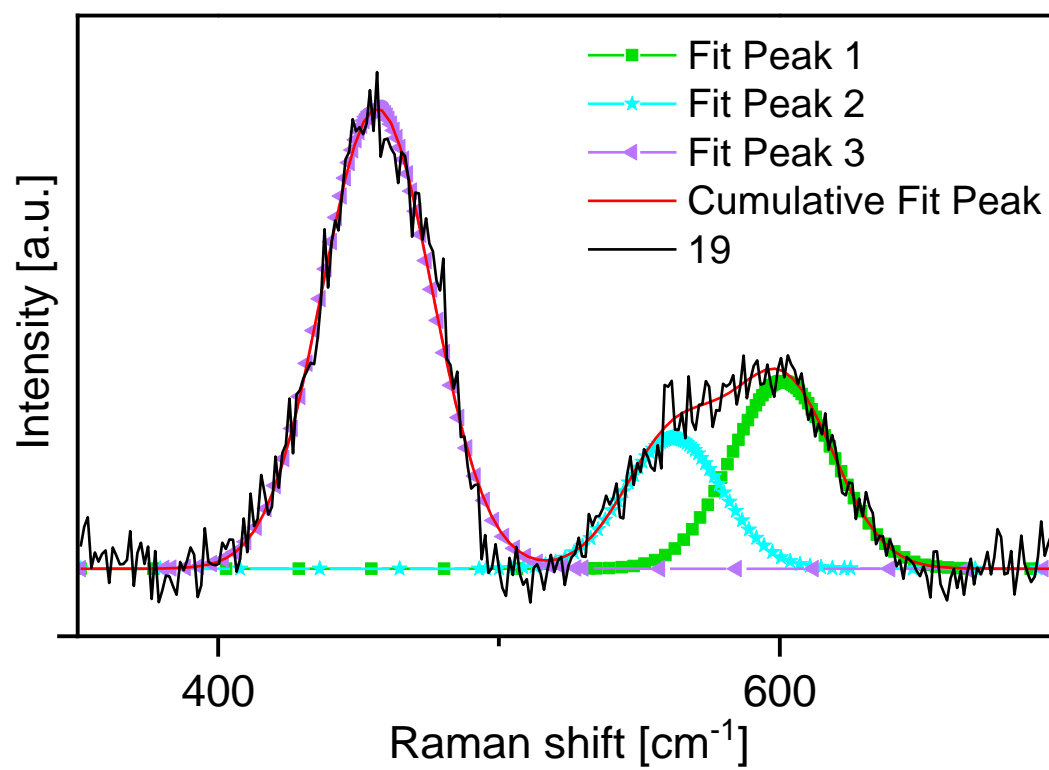
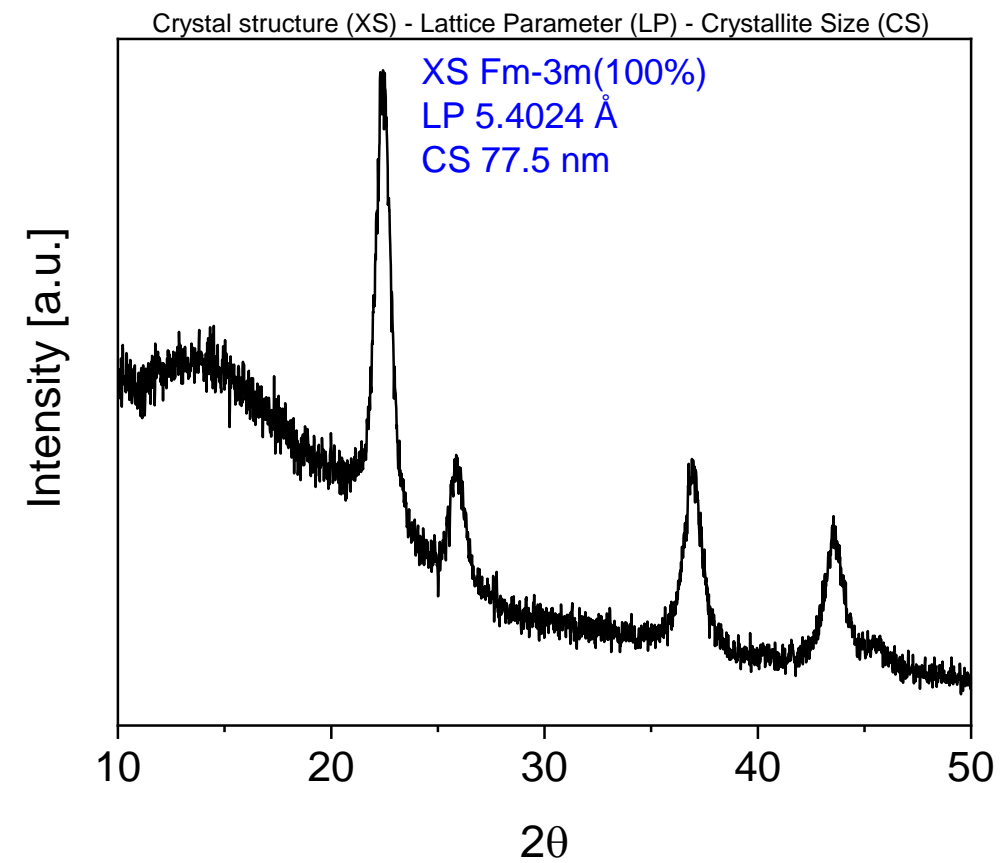
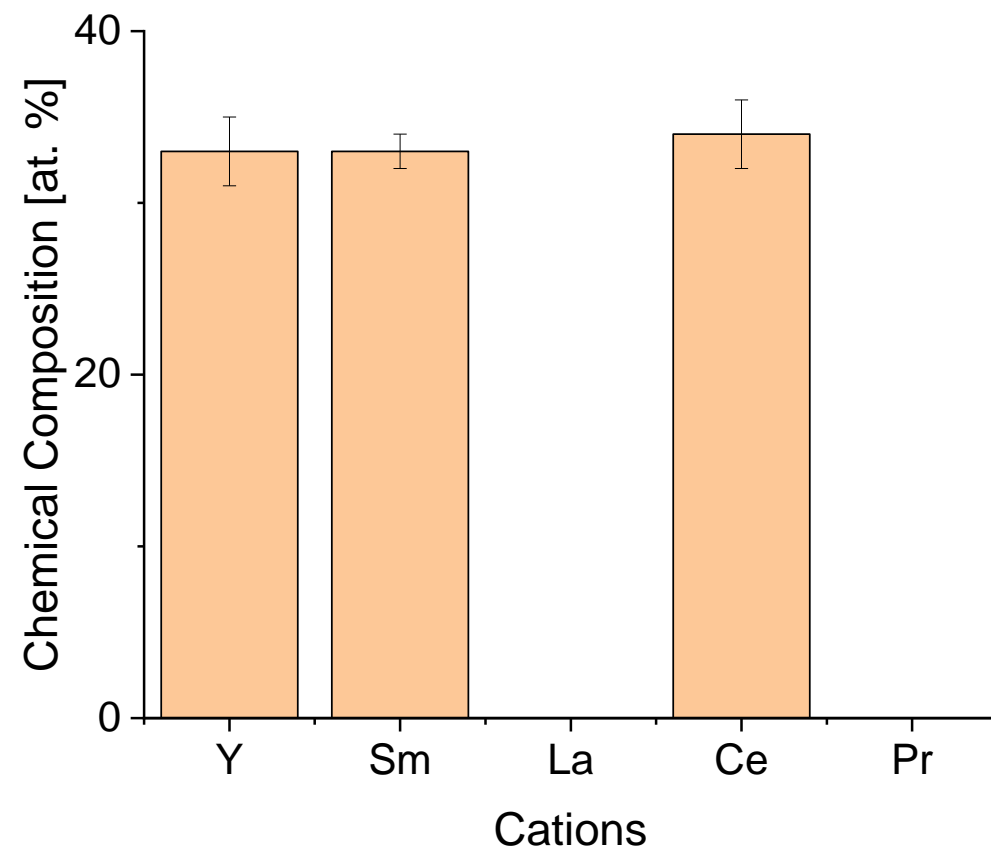
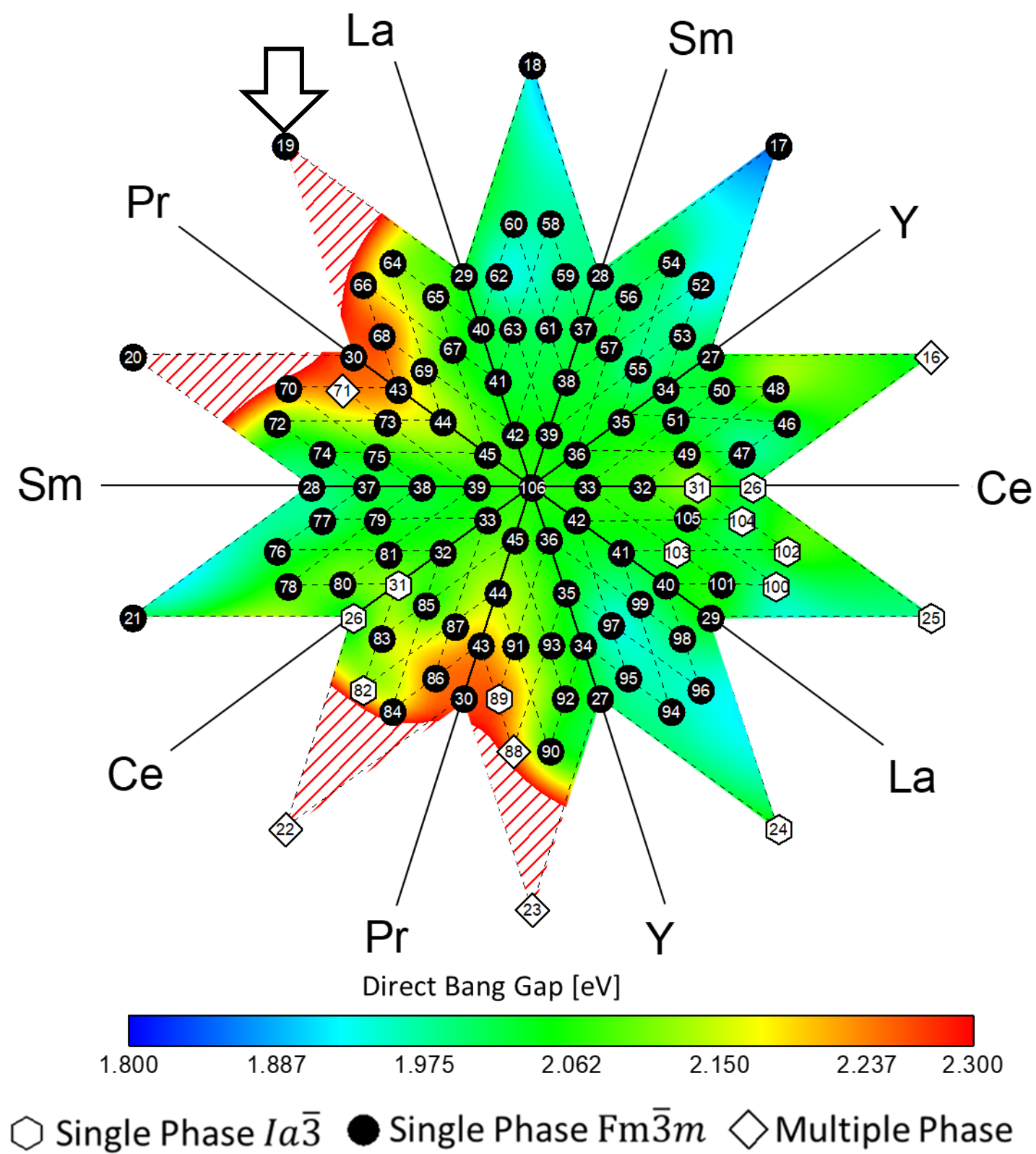


# Sample 18

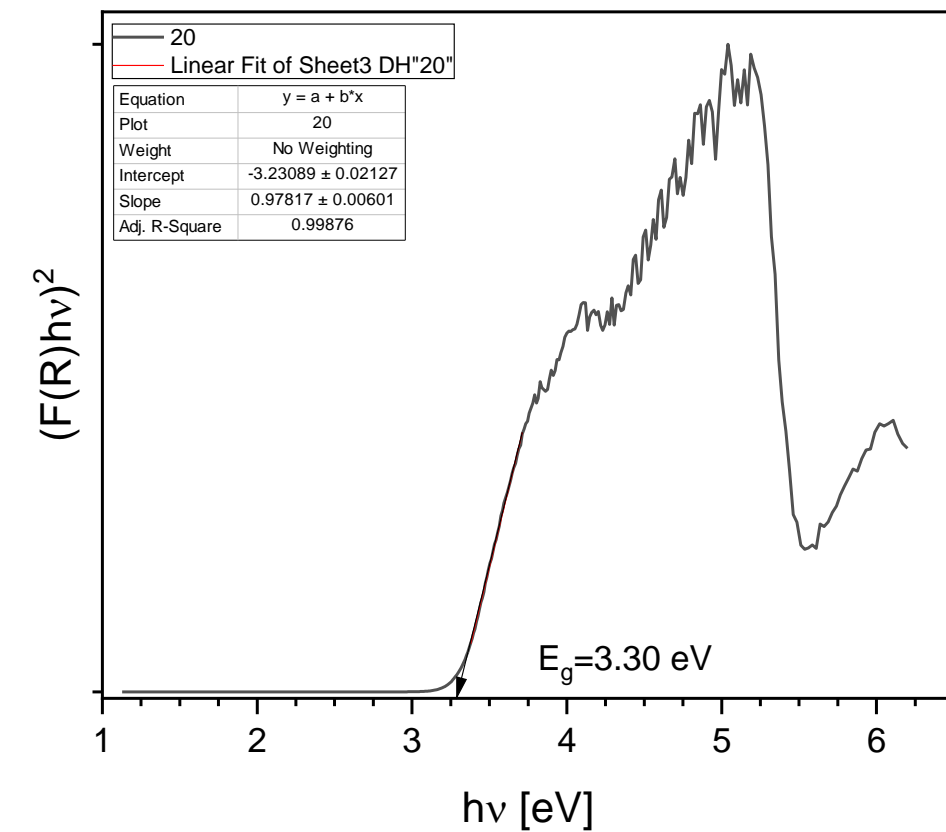
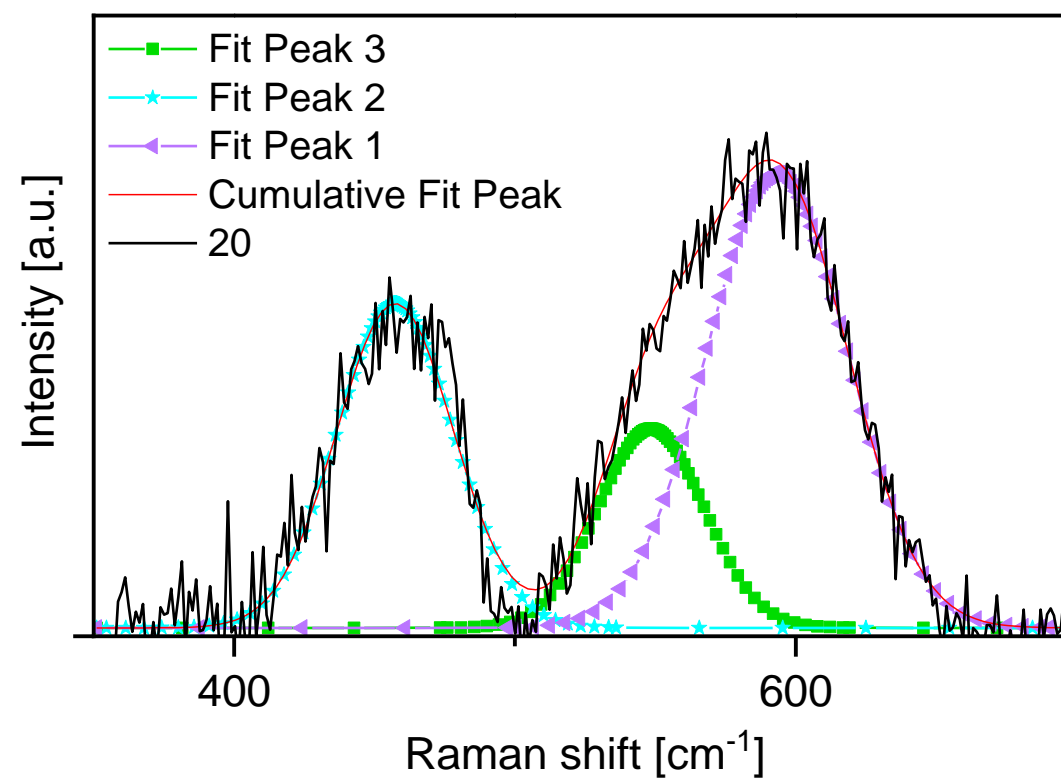
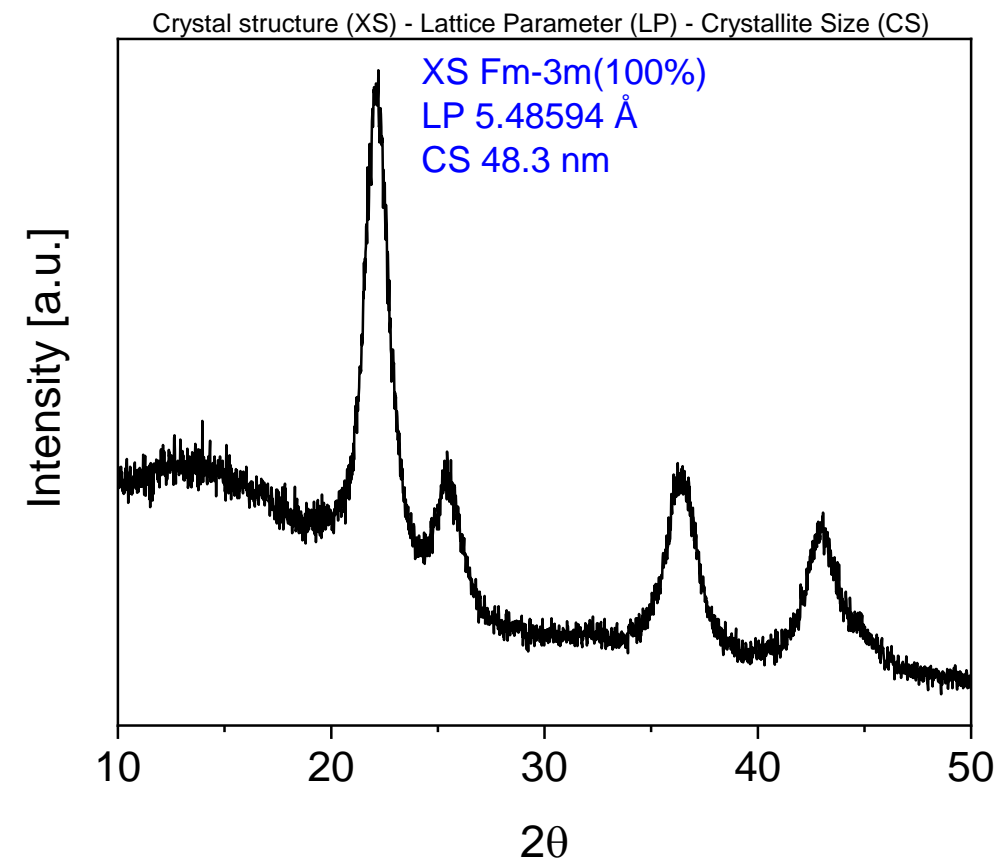
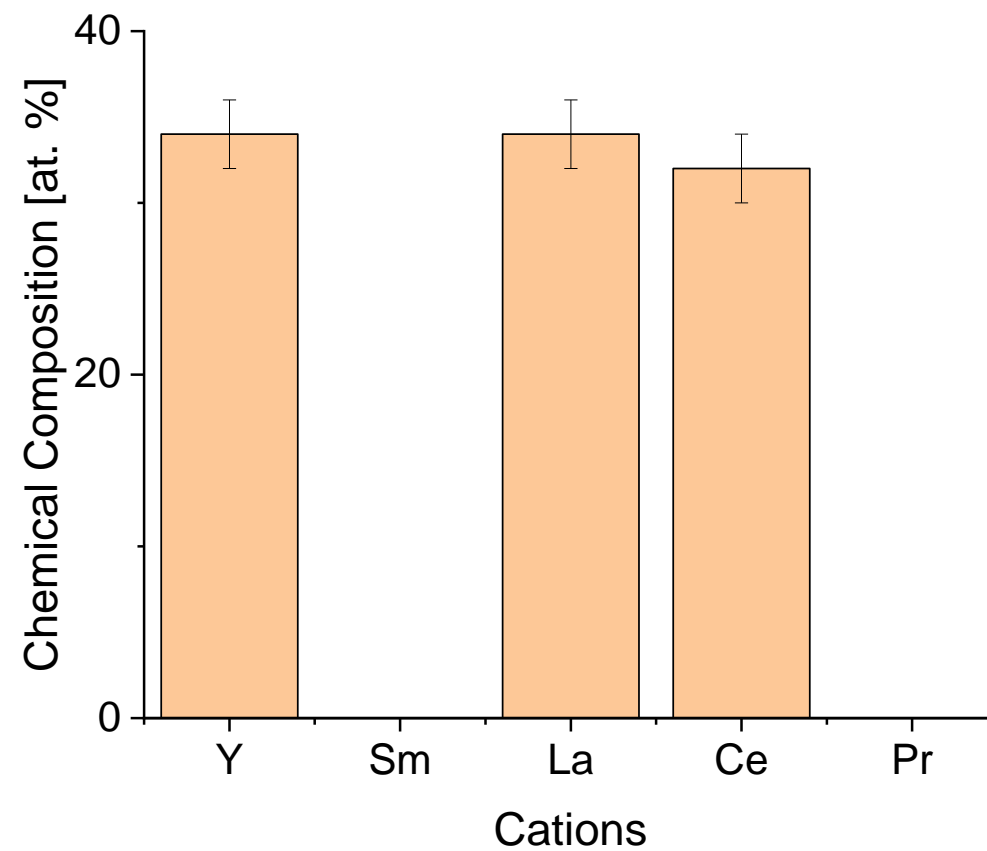
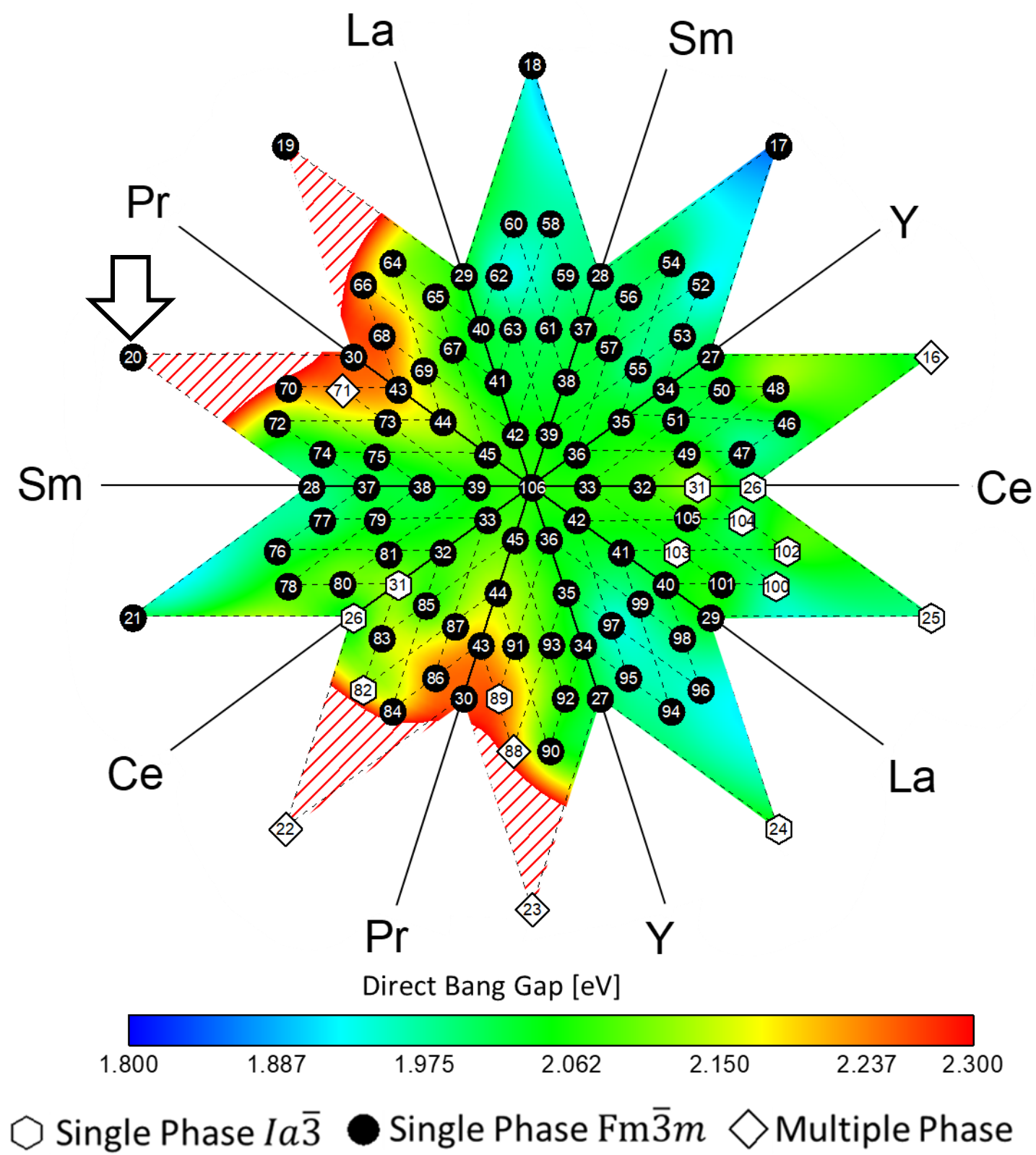




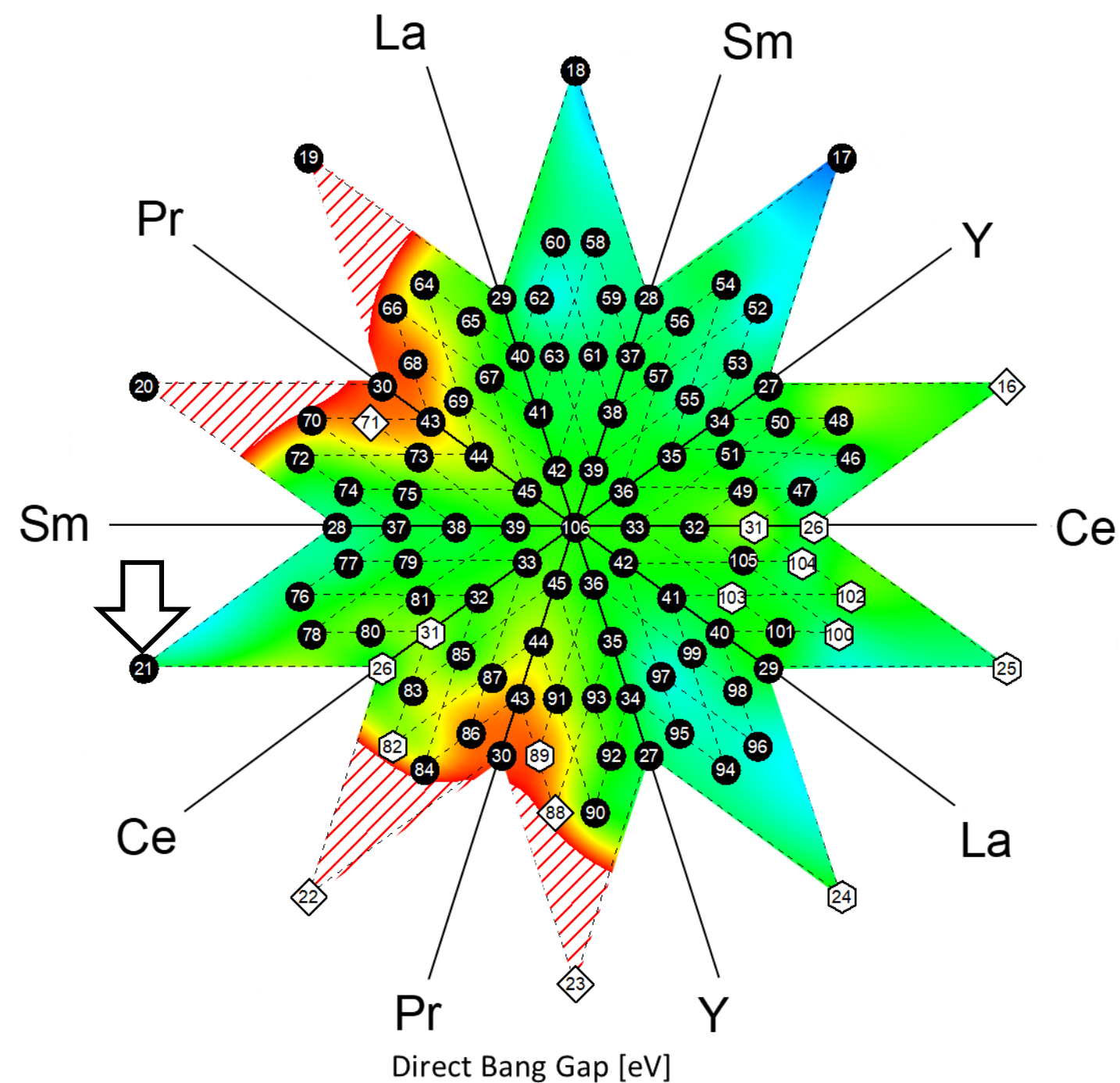
# Sample 19



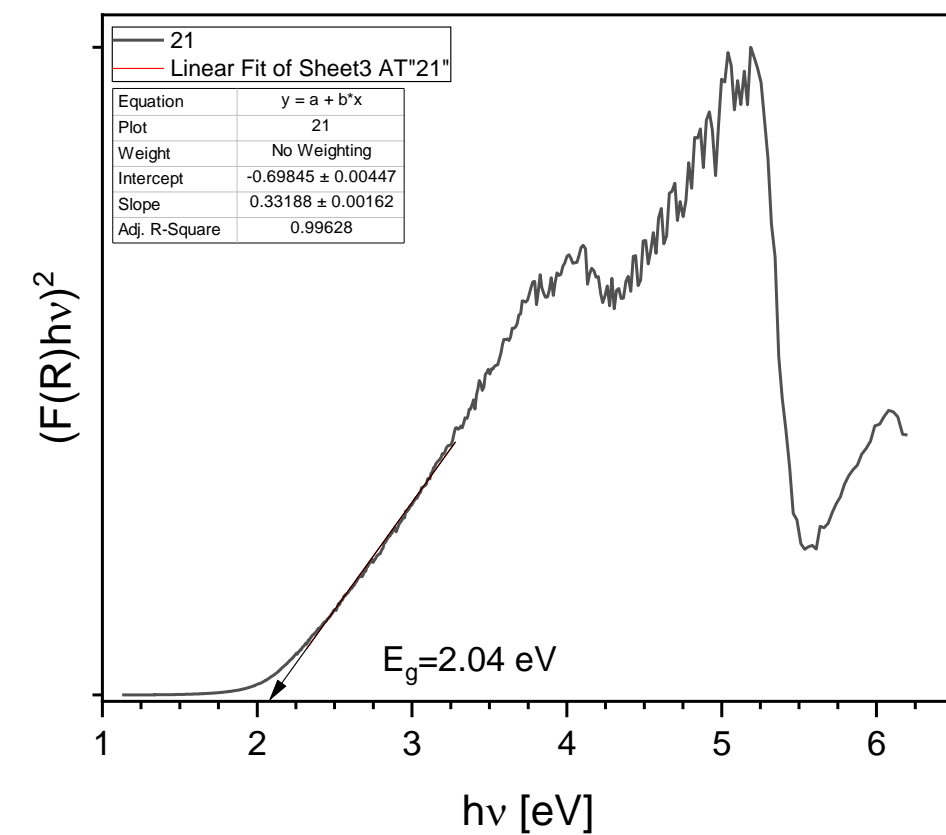
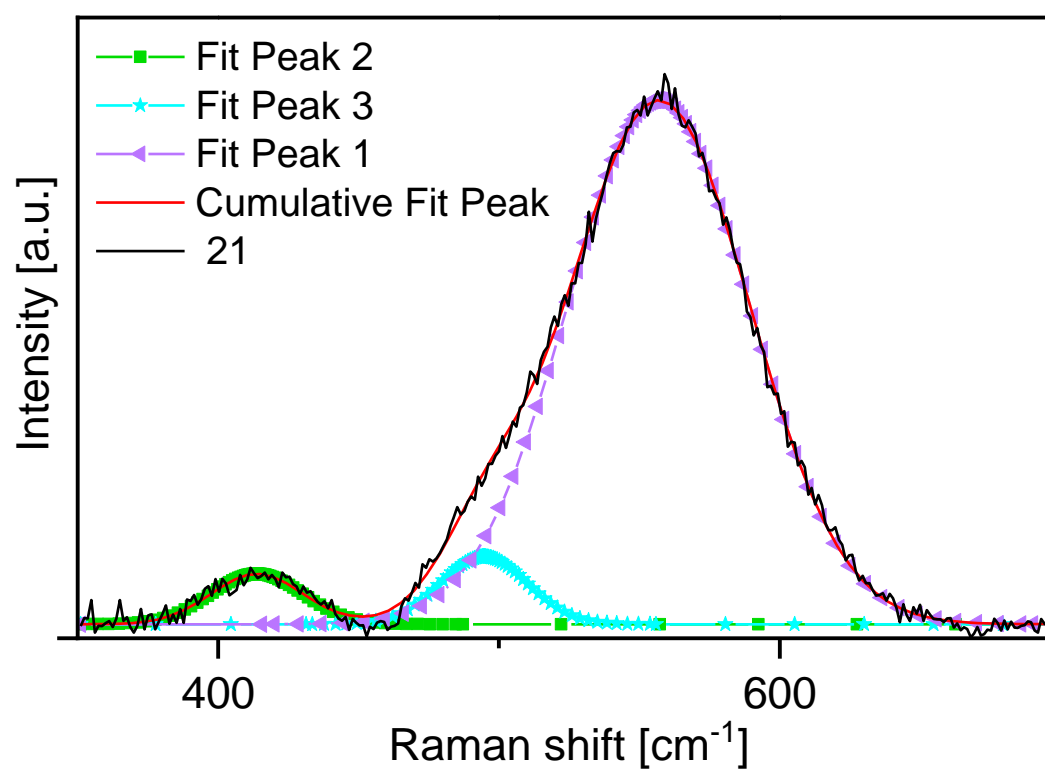
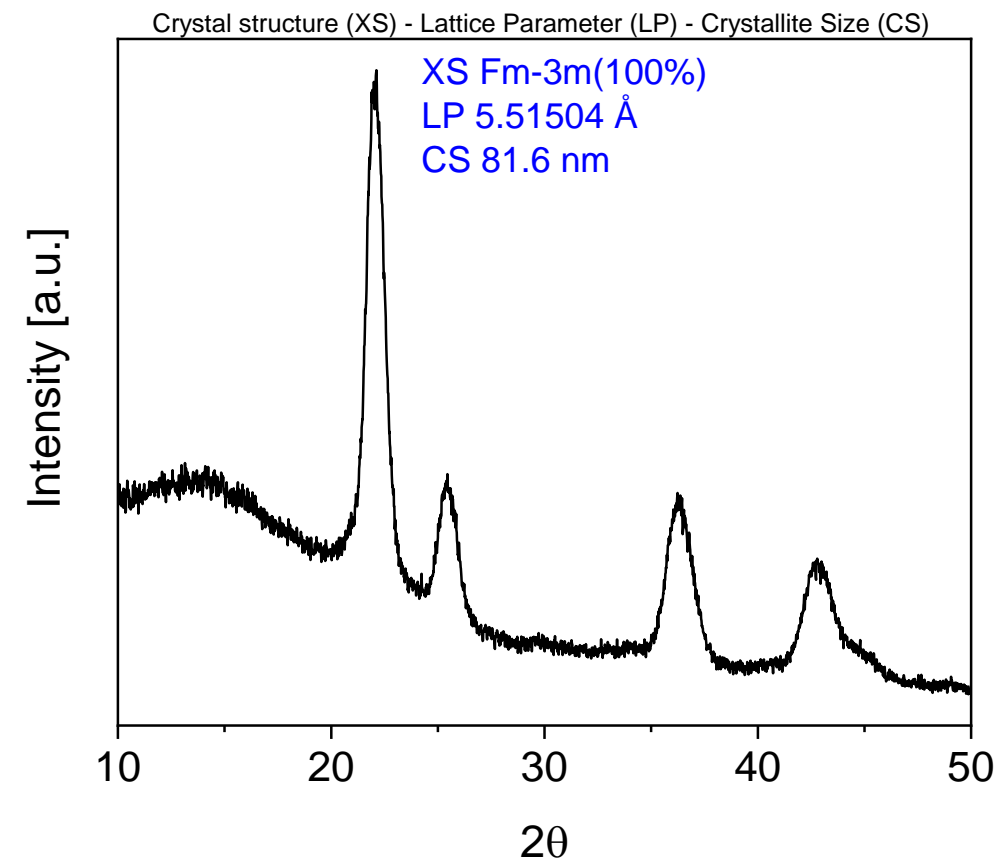
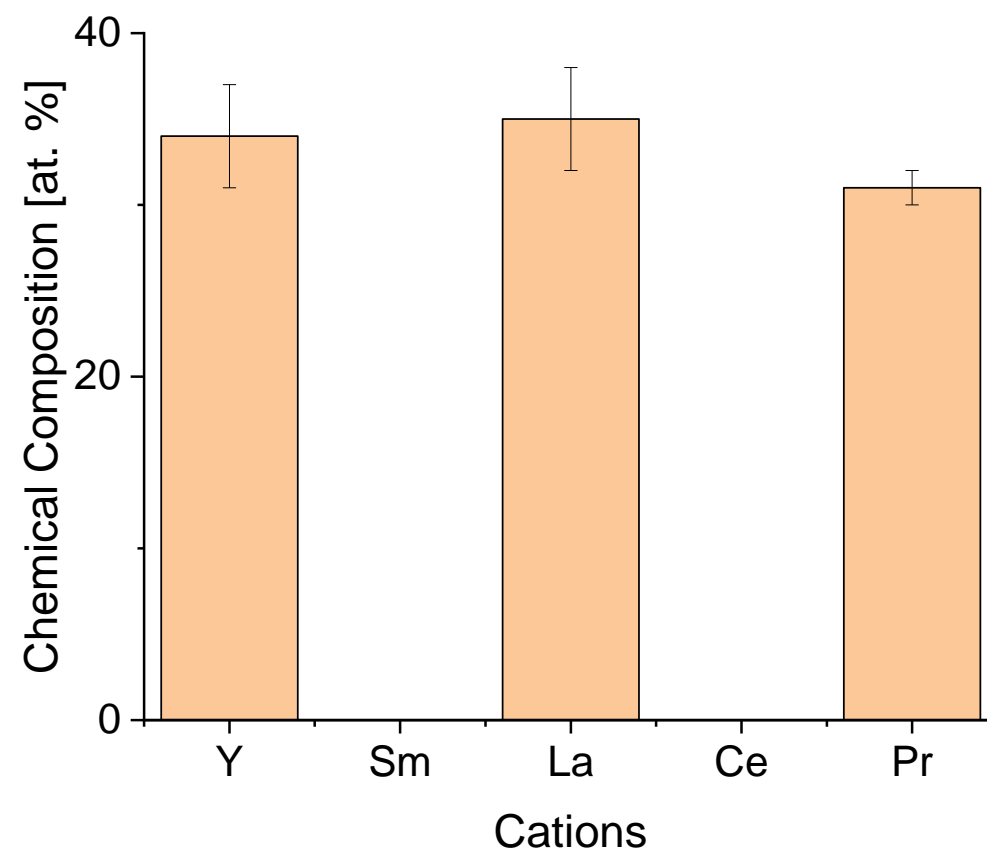
# Sample 20



# Sample 21

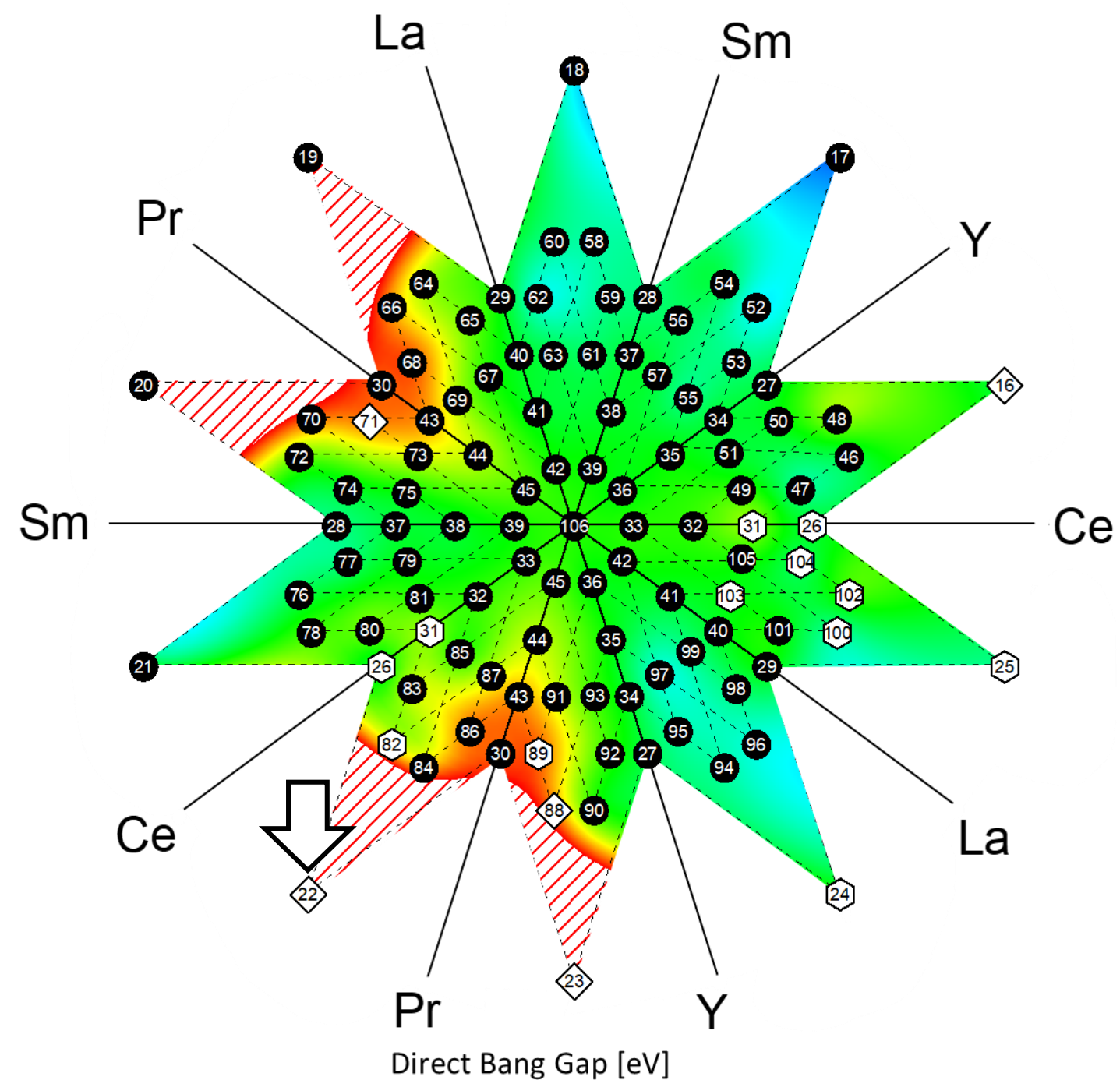


◊ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

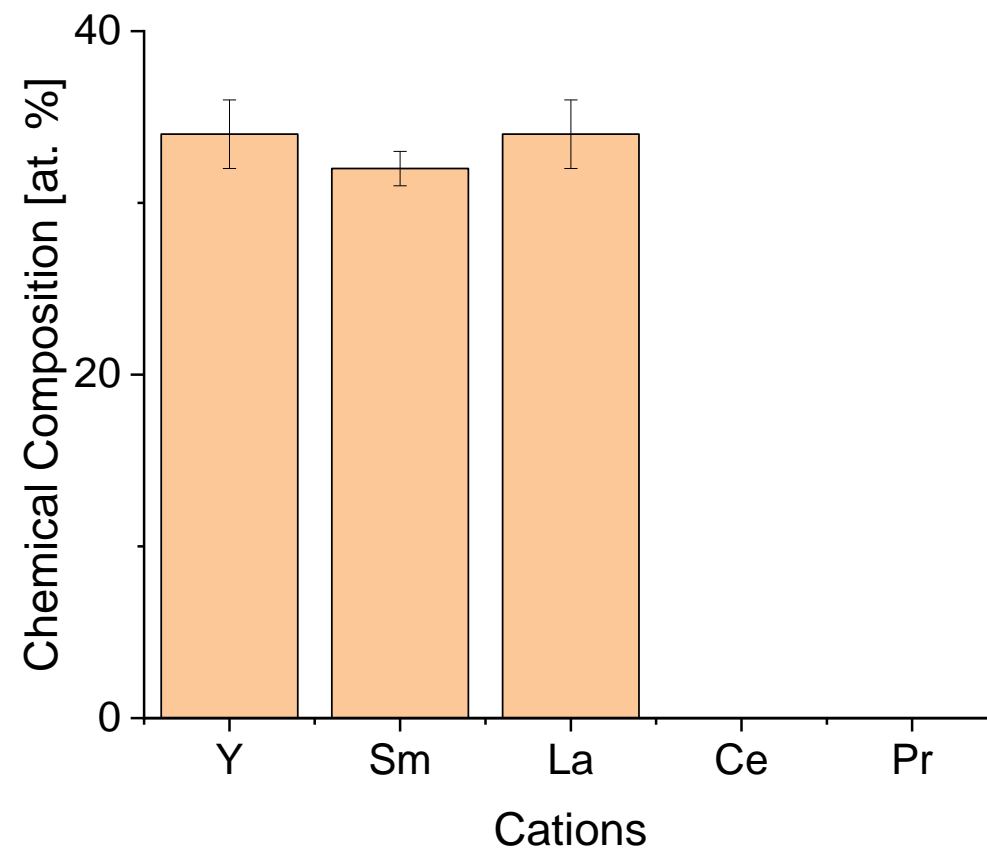




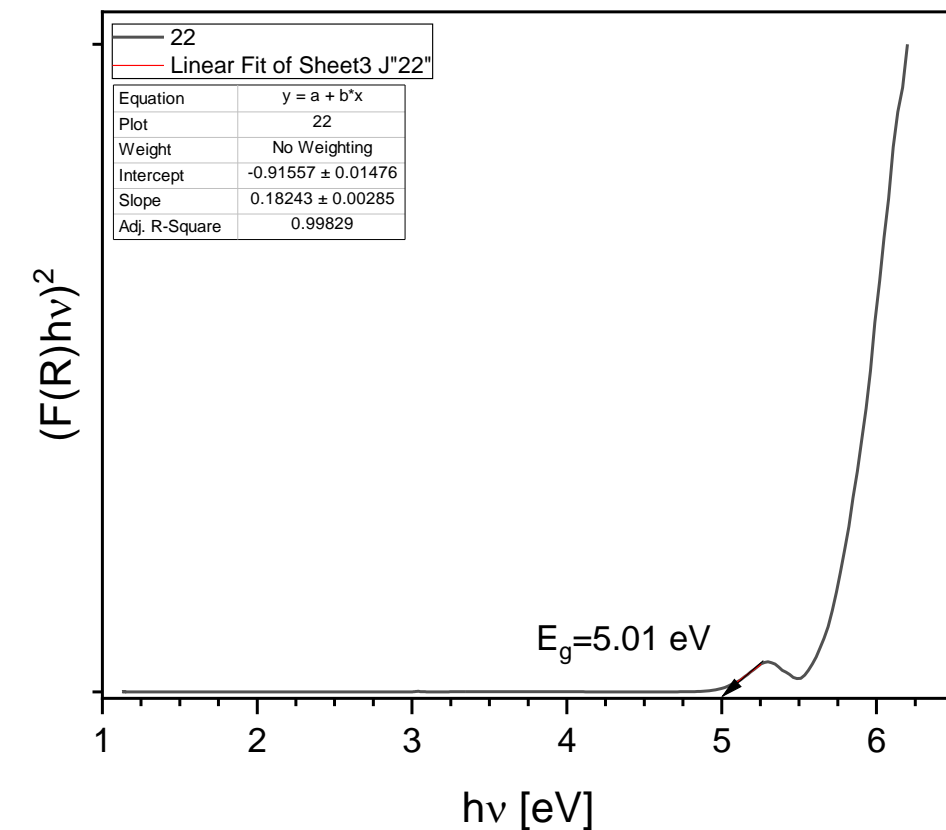
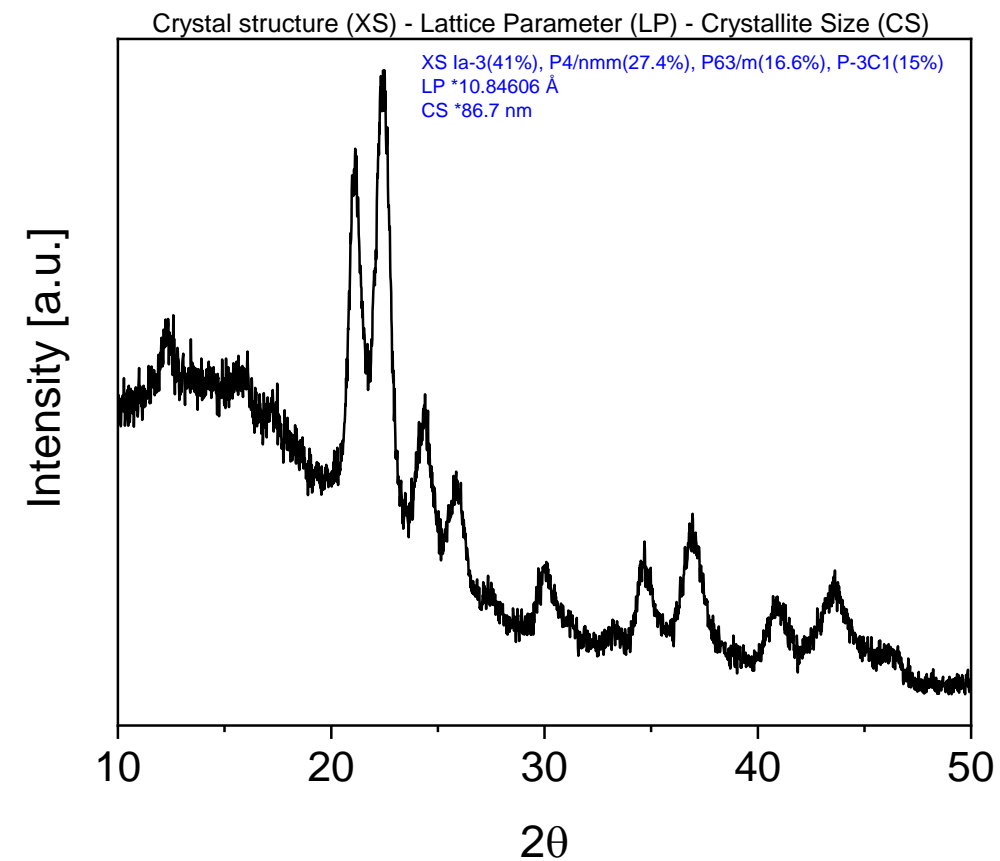
# Sample 22



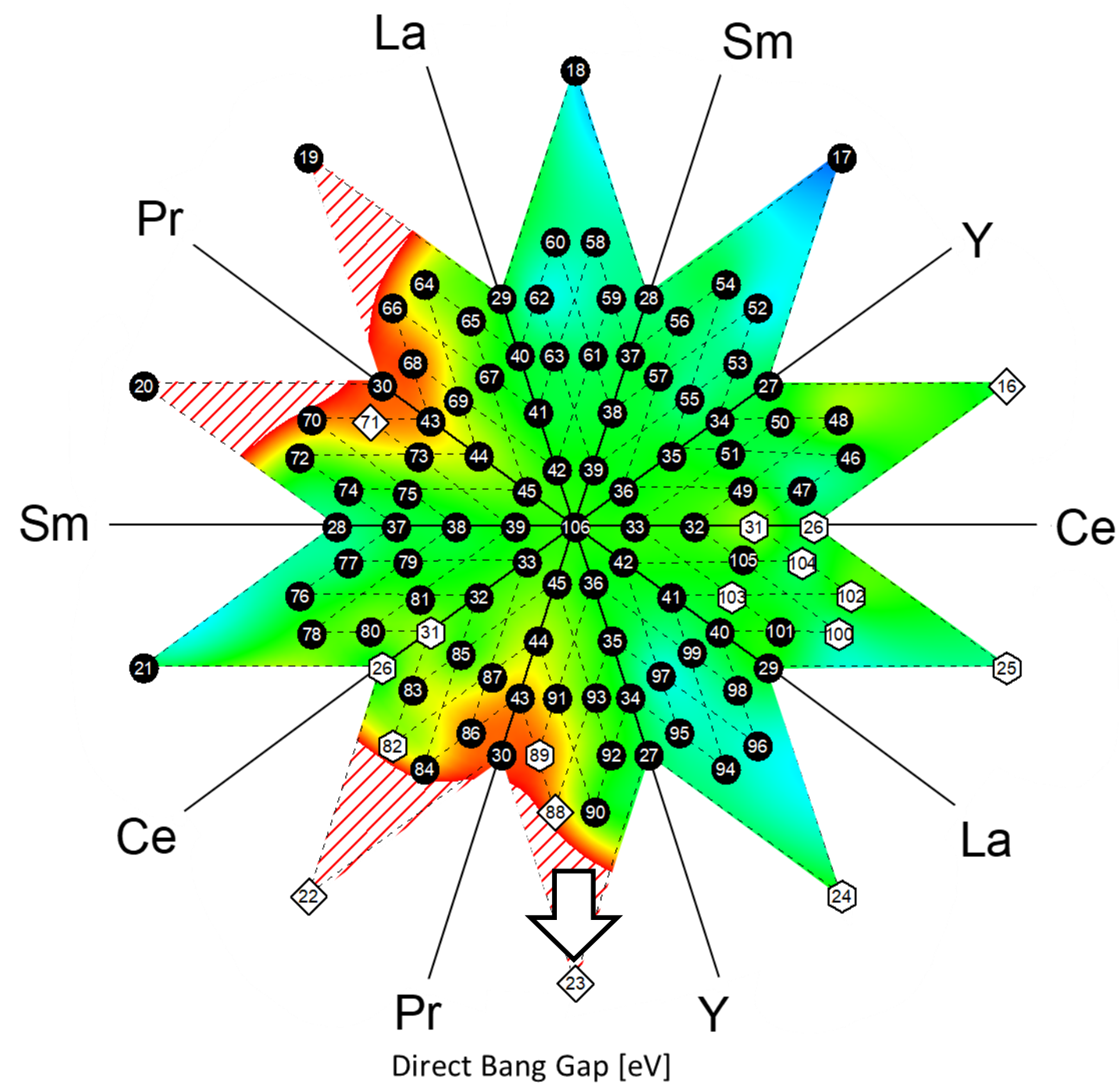
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



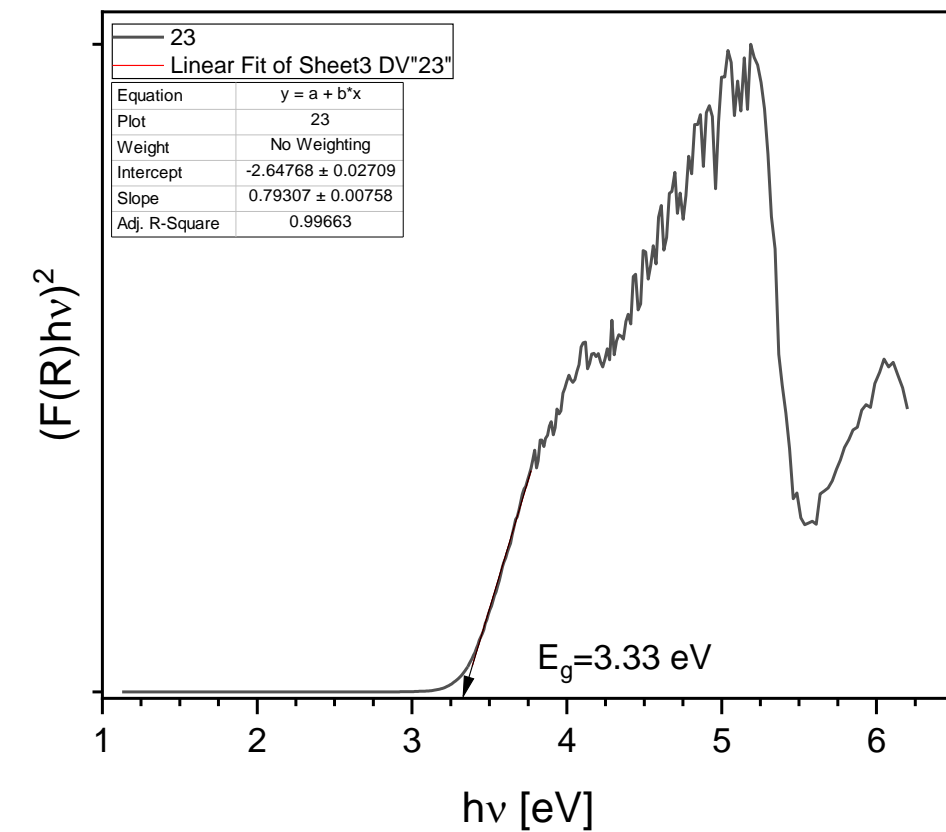
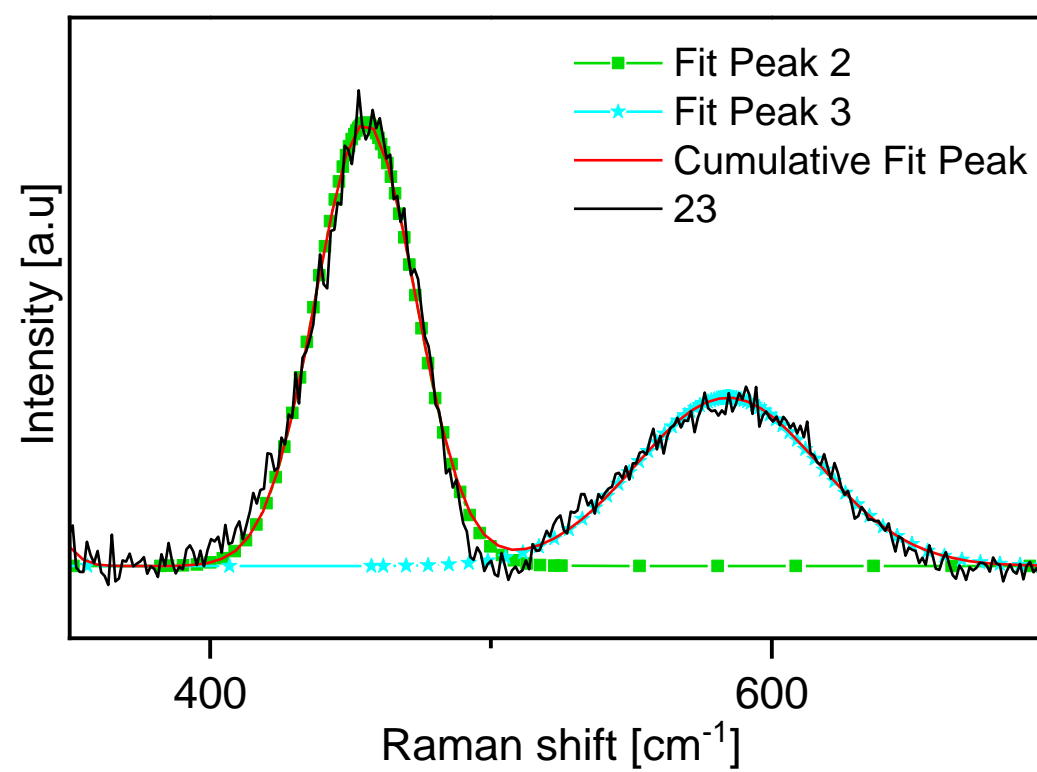
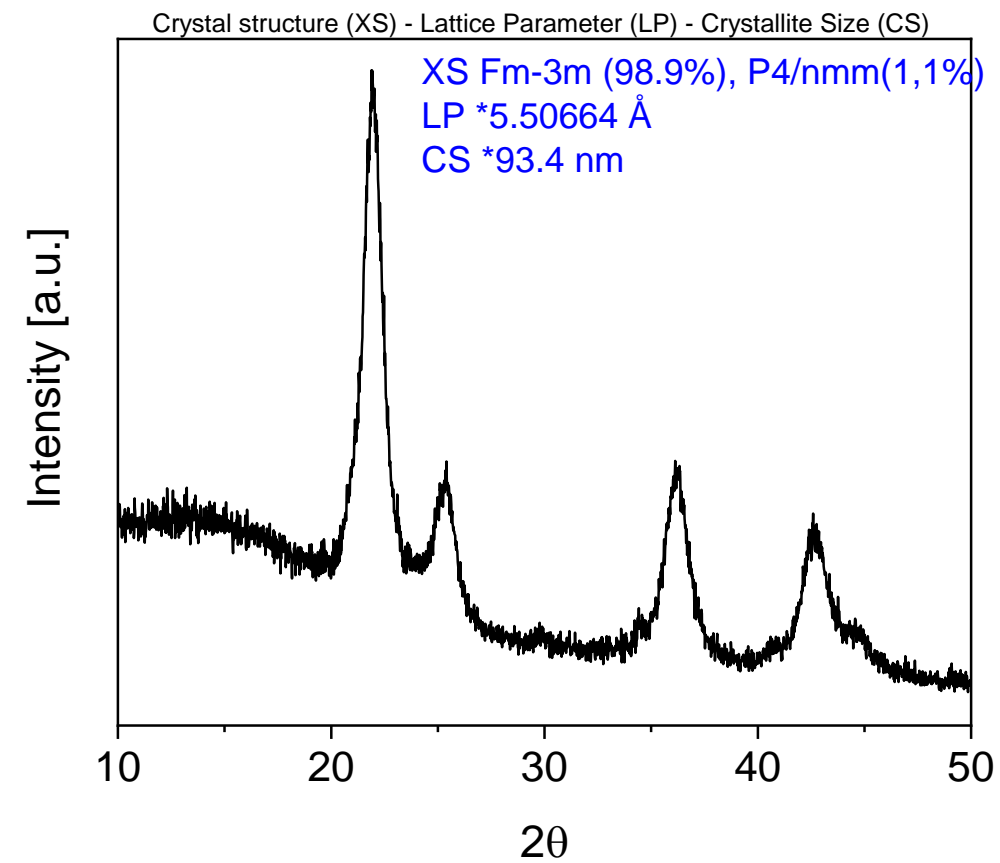
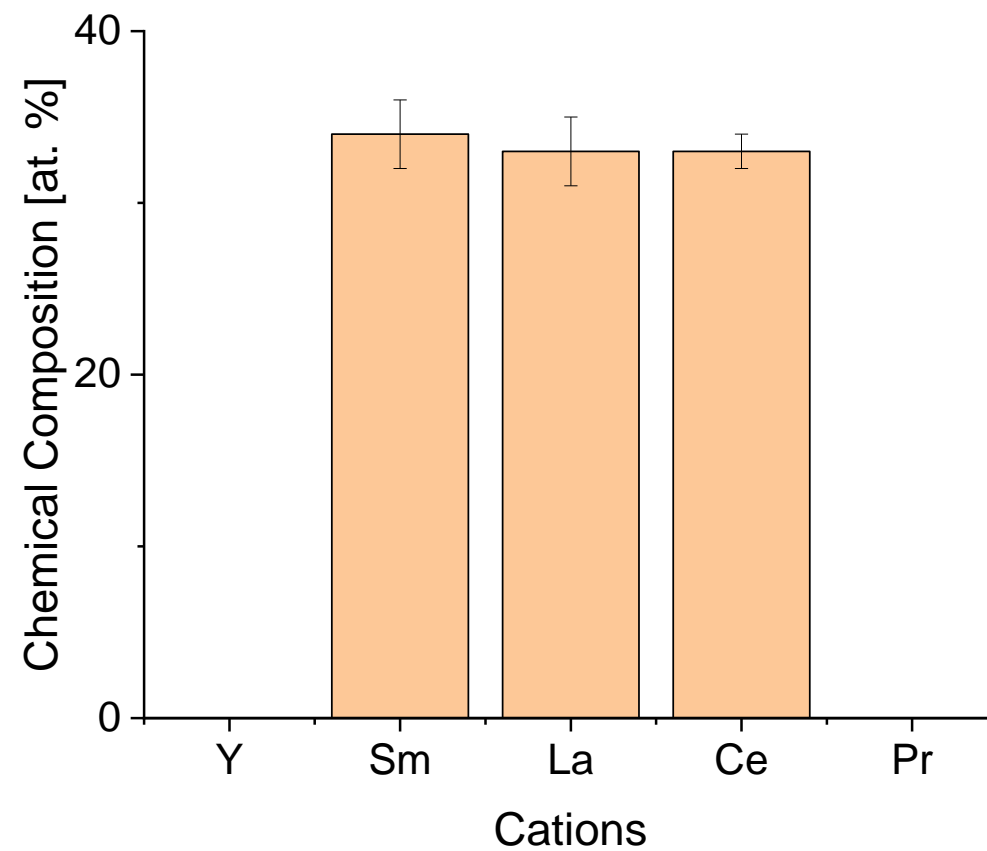
N.A.



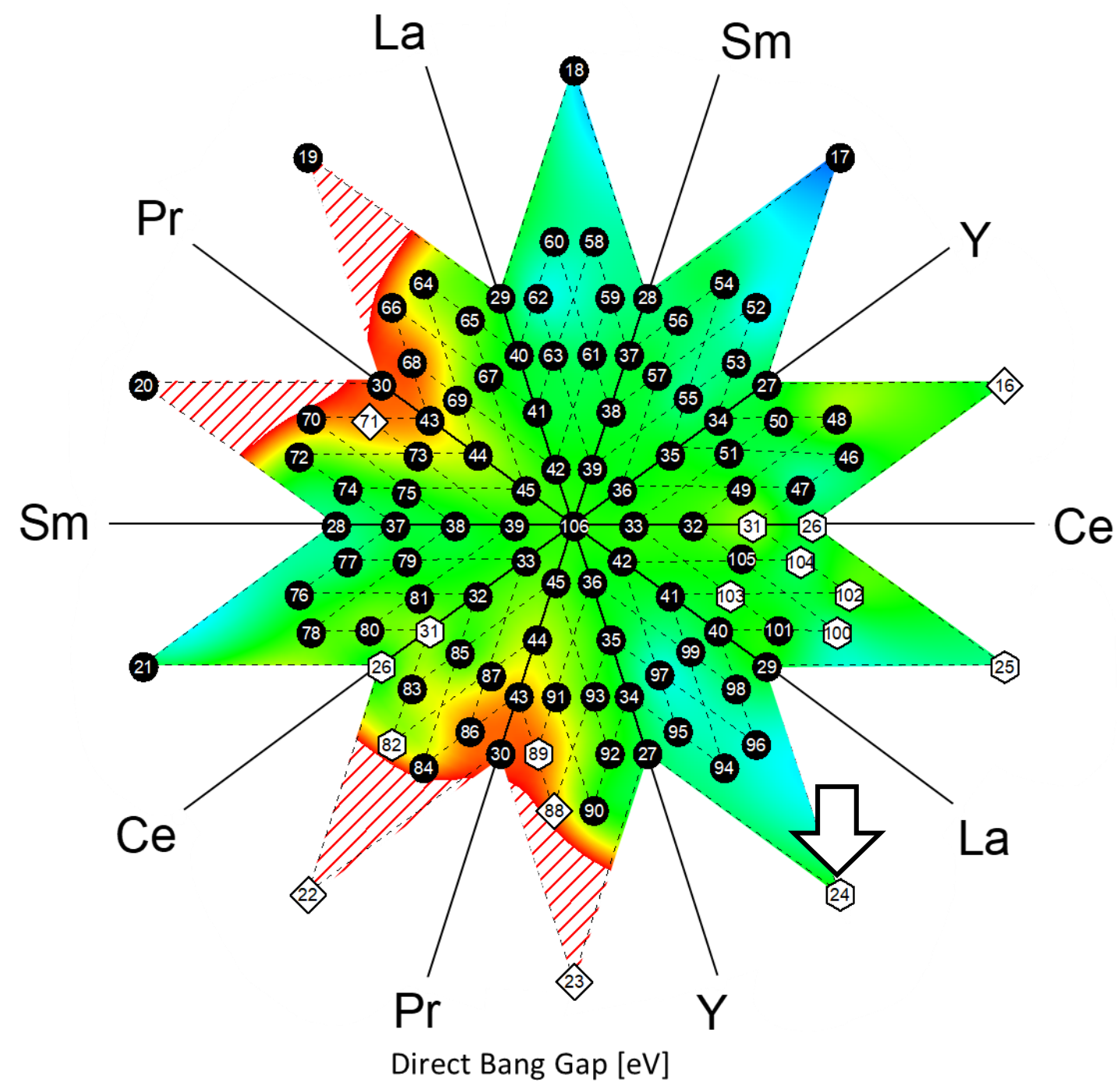
# Sample 23



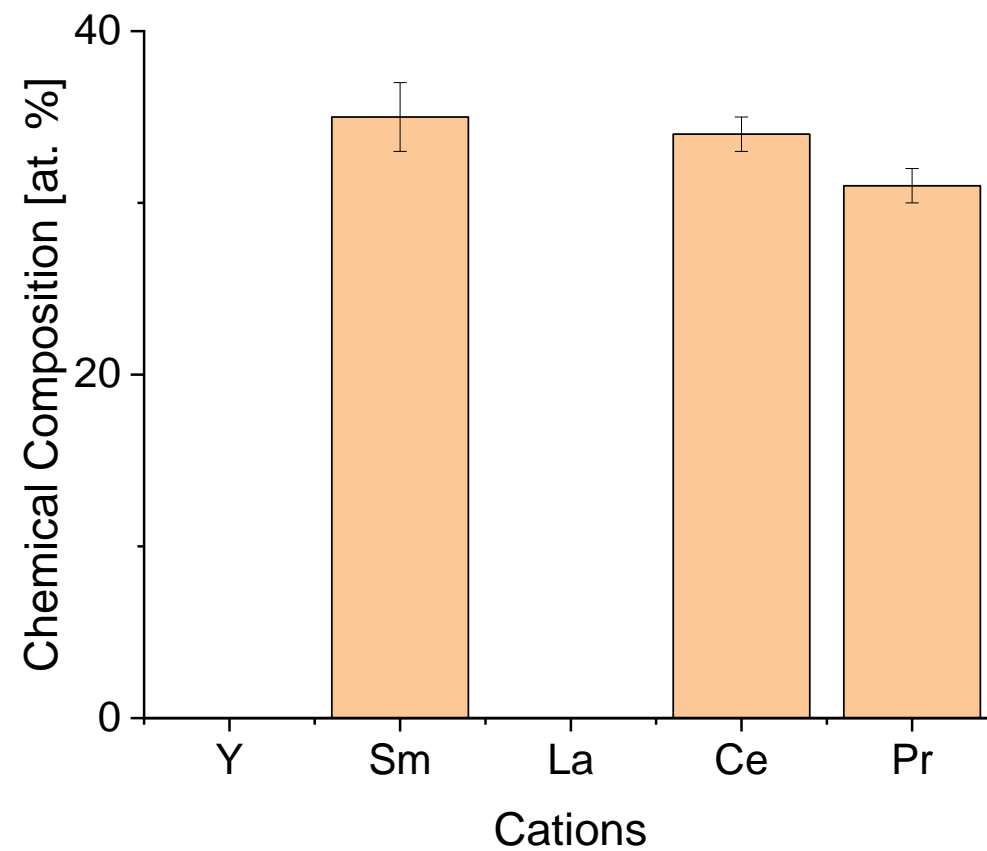
○ Single Phase  $Ia\bar{3}$ 
● Single Phase  $Fm\bar{3}m$ 
◇ Multiple Phase



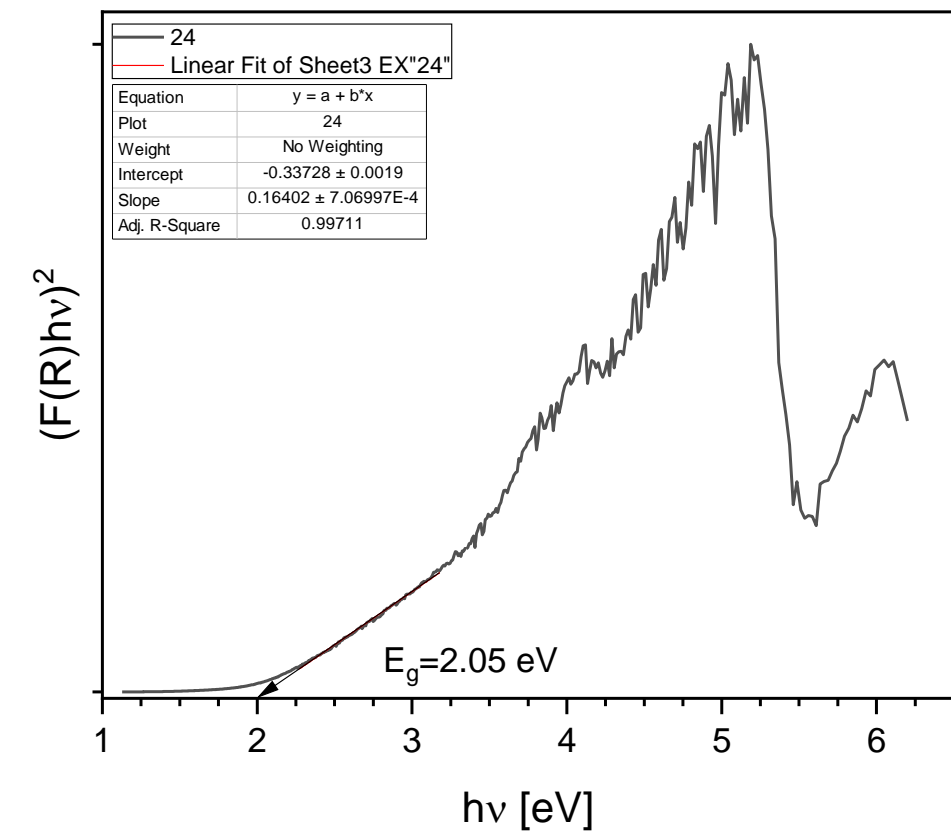
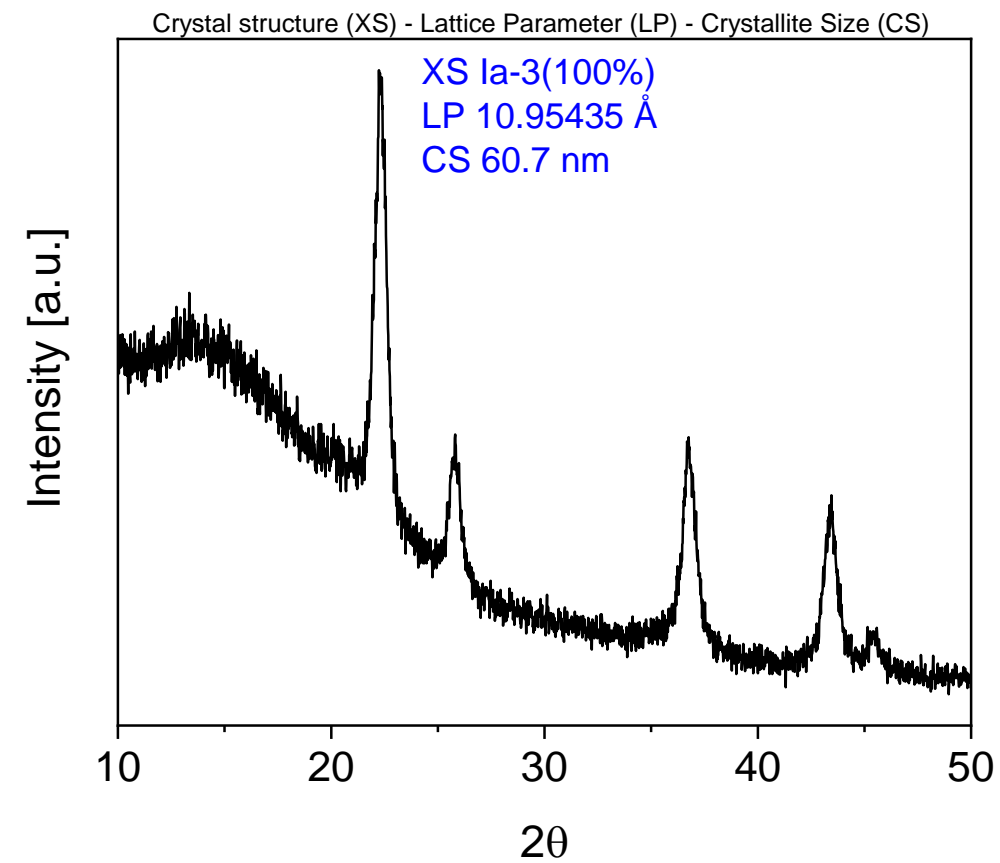
# Sample 24



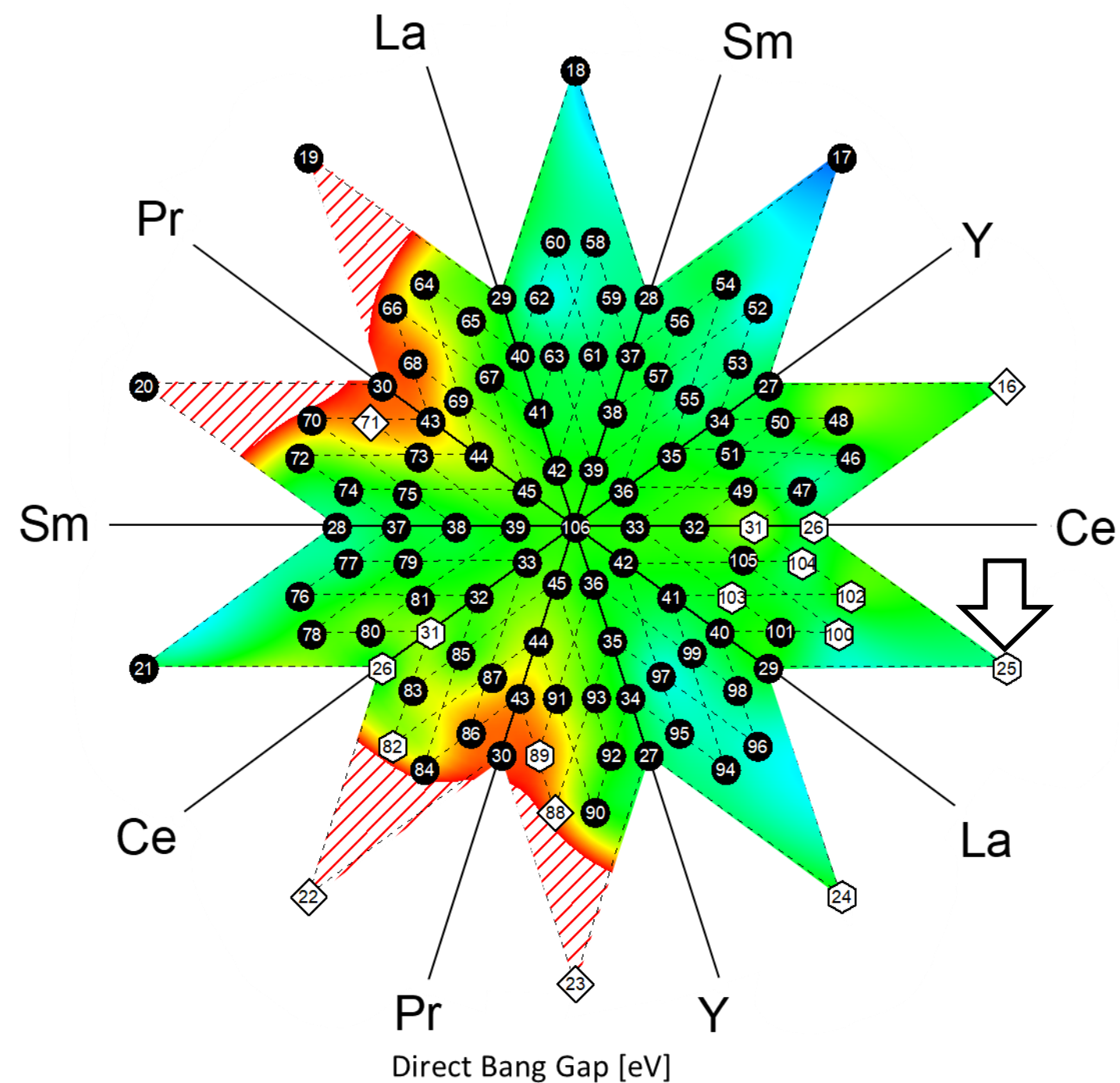
○ Single Phase  $Ia\bar{3}$ 
 Single Phase  $Fm\bar{3}m$ 
◇ Multiple Phase



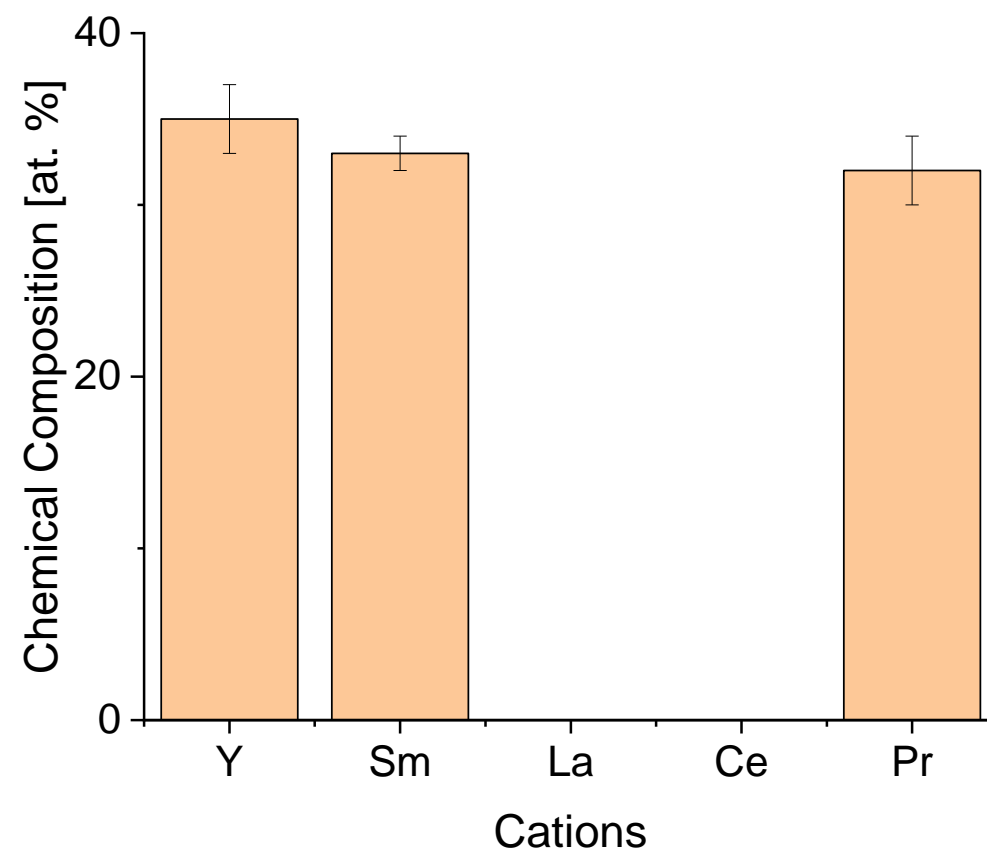
N.A.



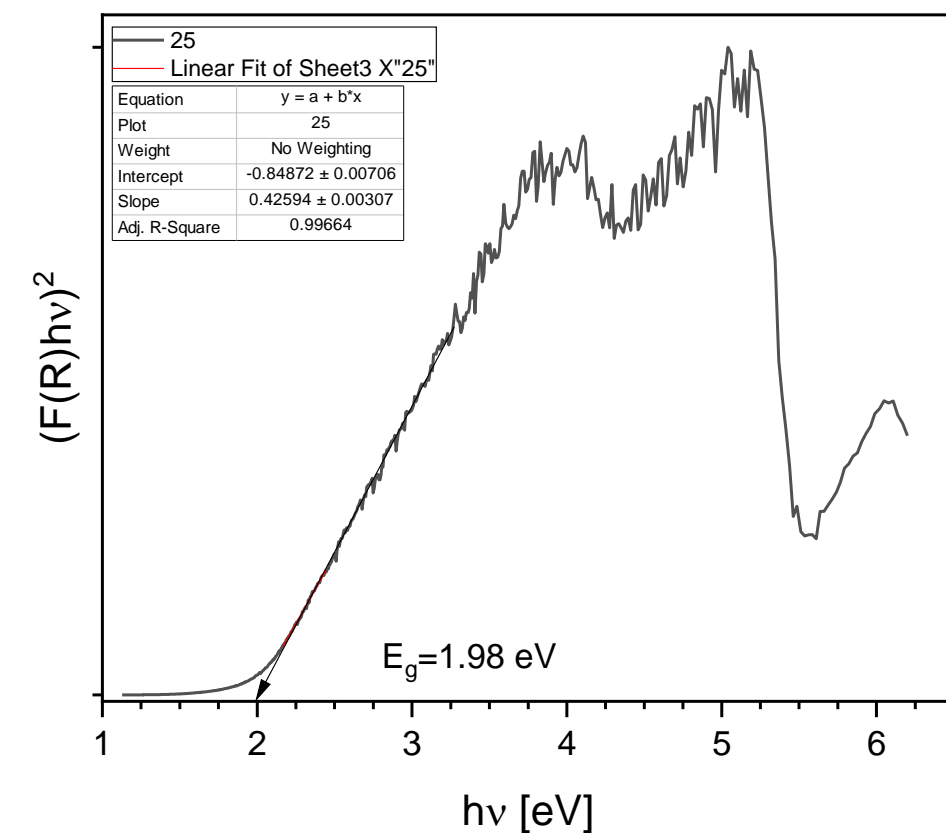
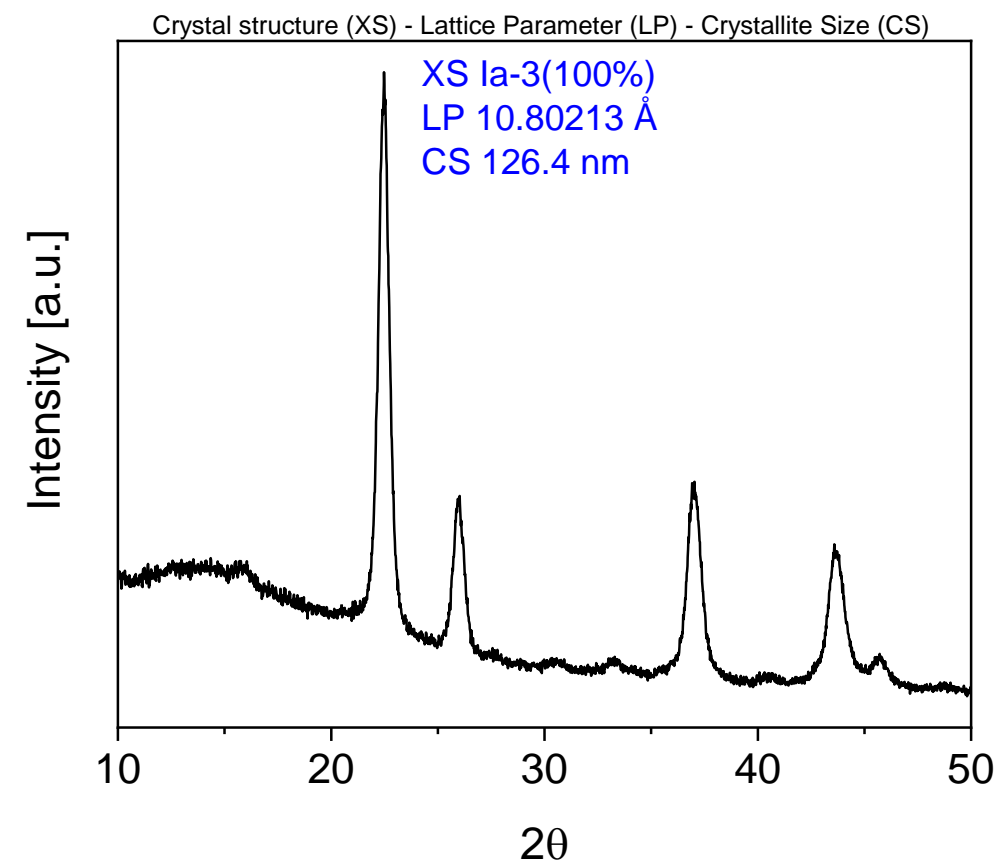
# Sample 25



◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

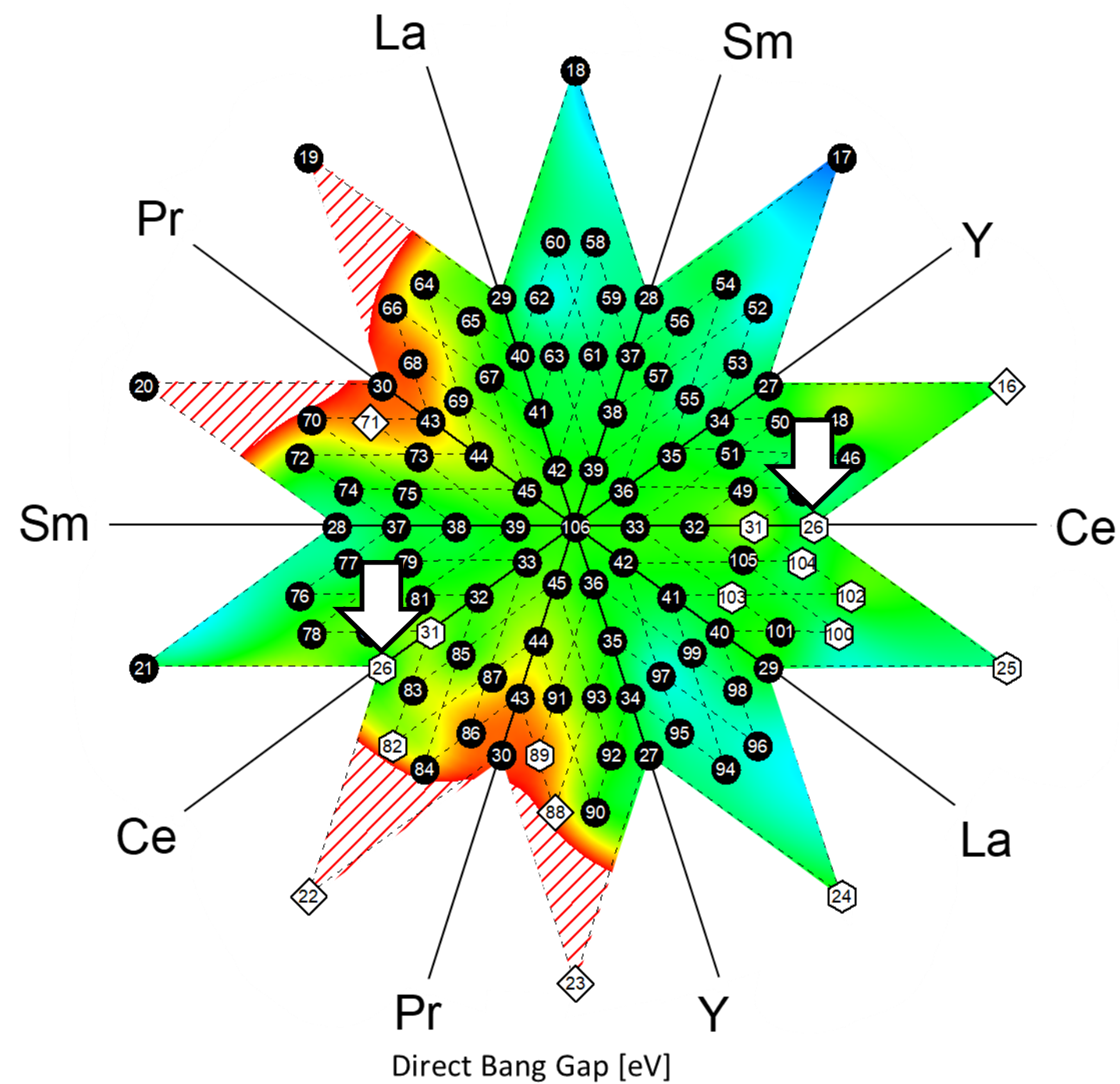


N.A.

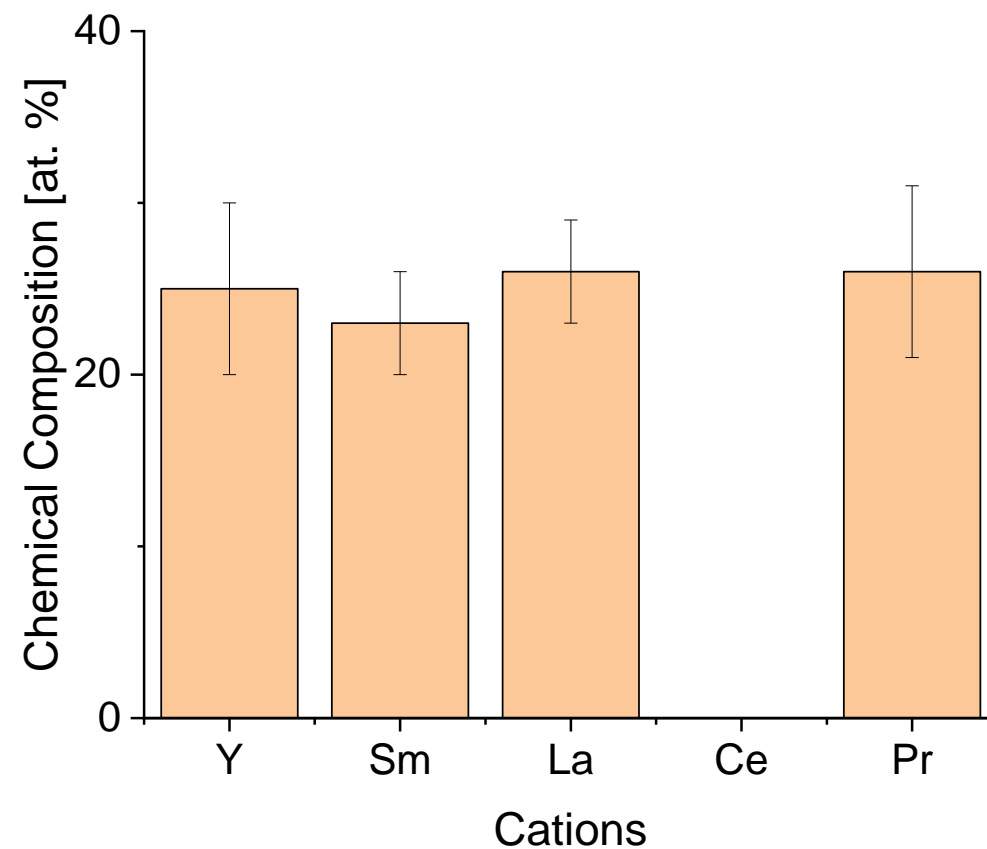




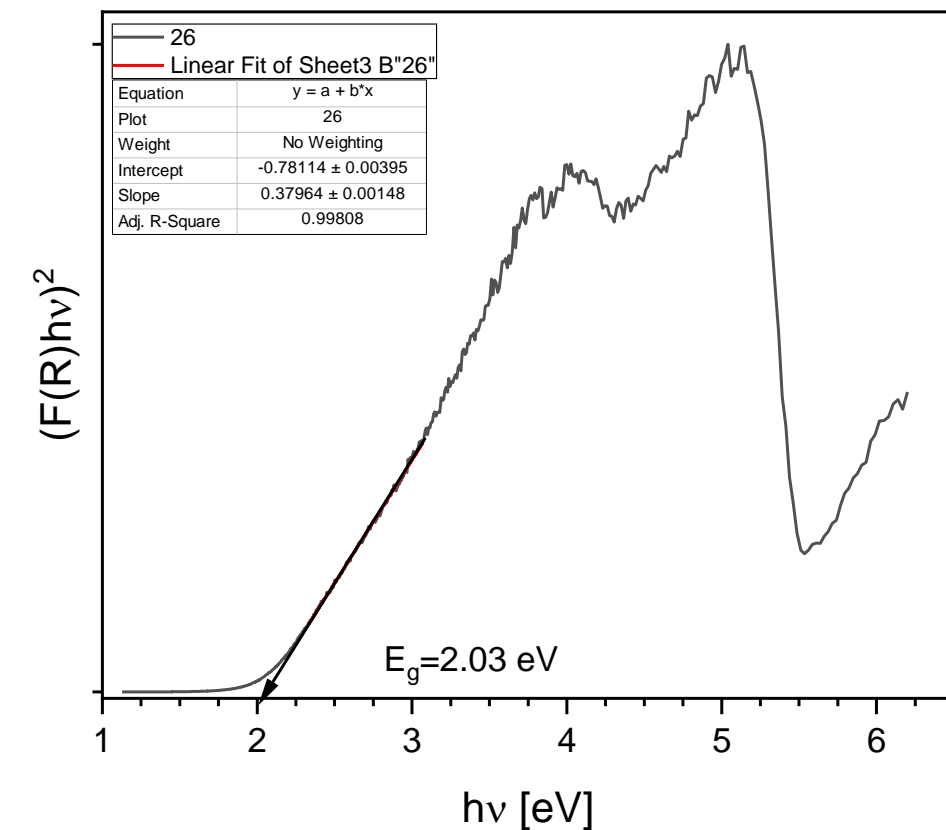
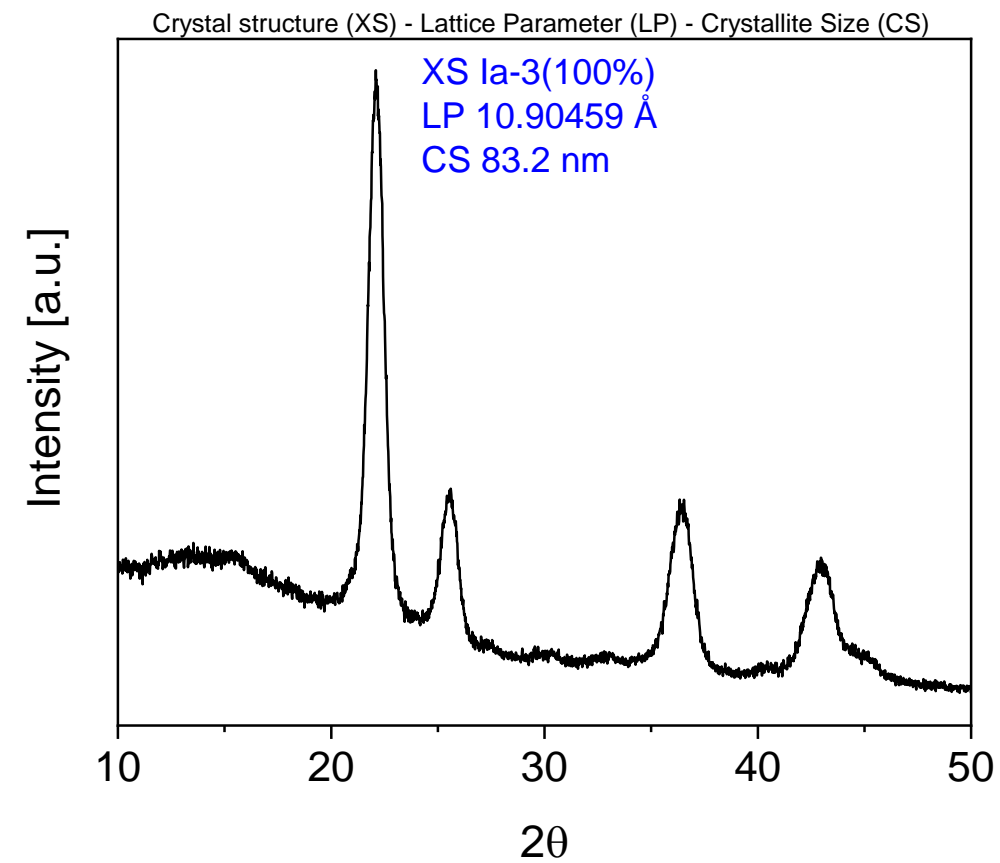
# Sample 26



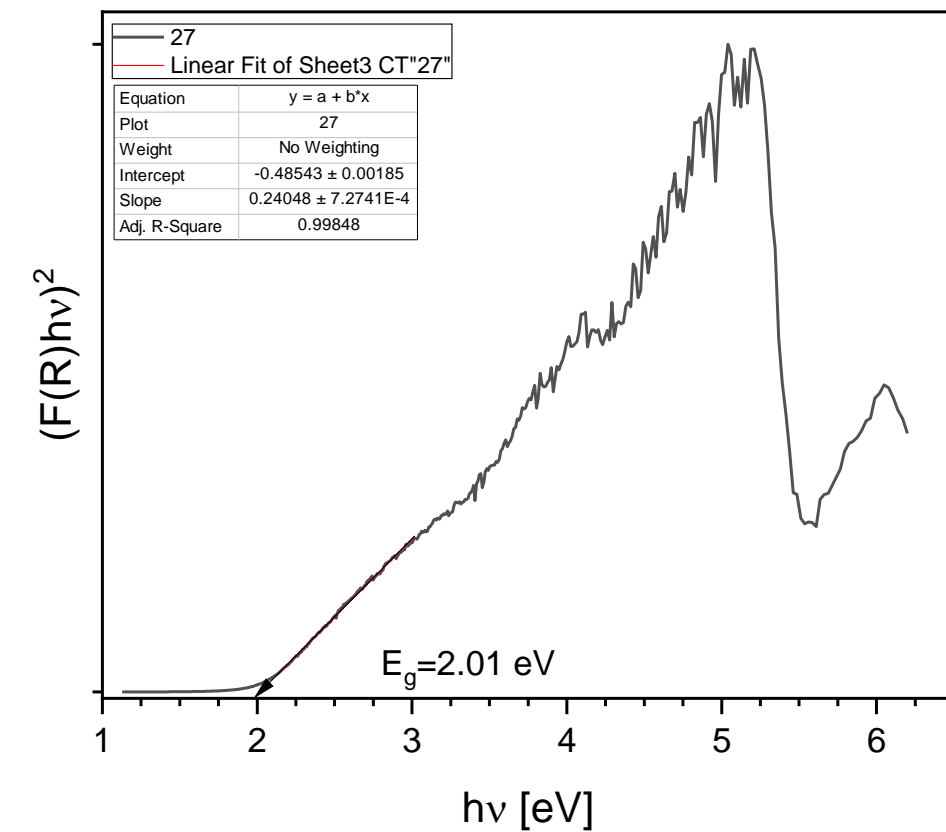
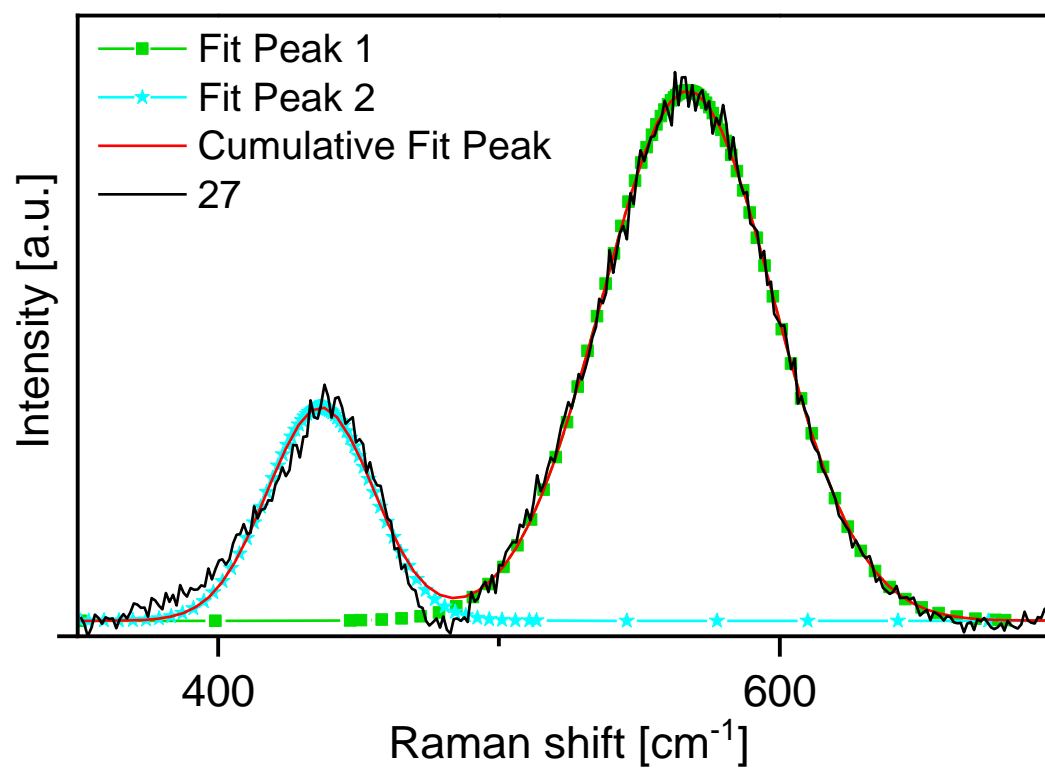
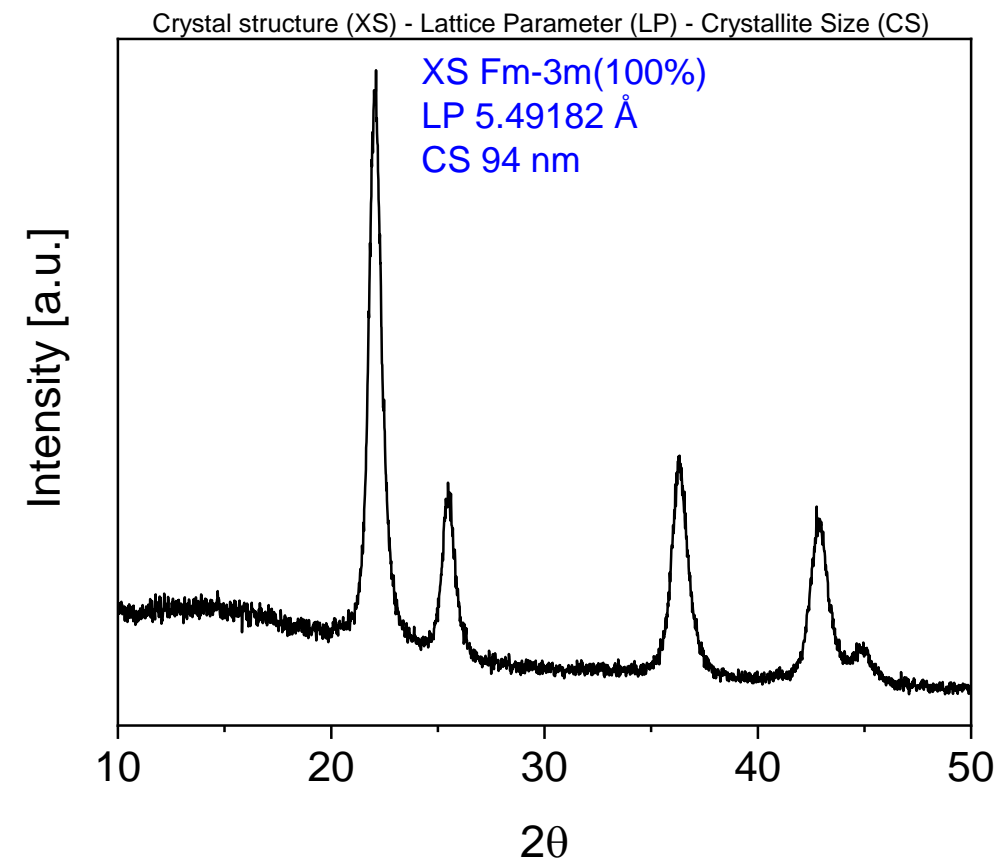
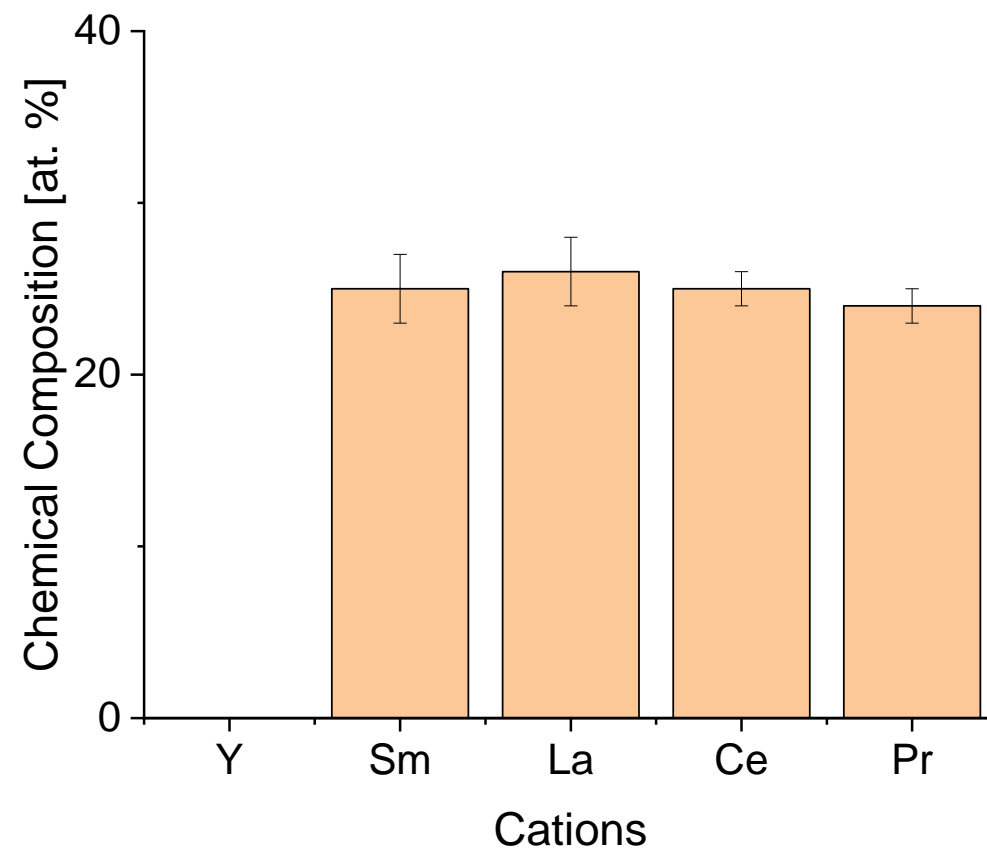
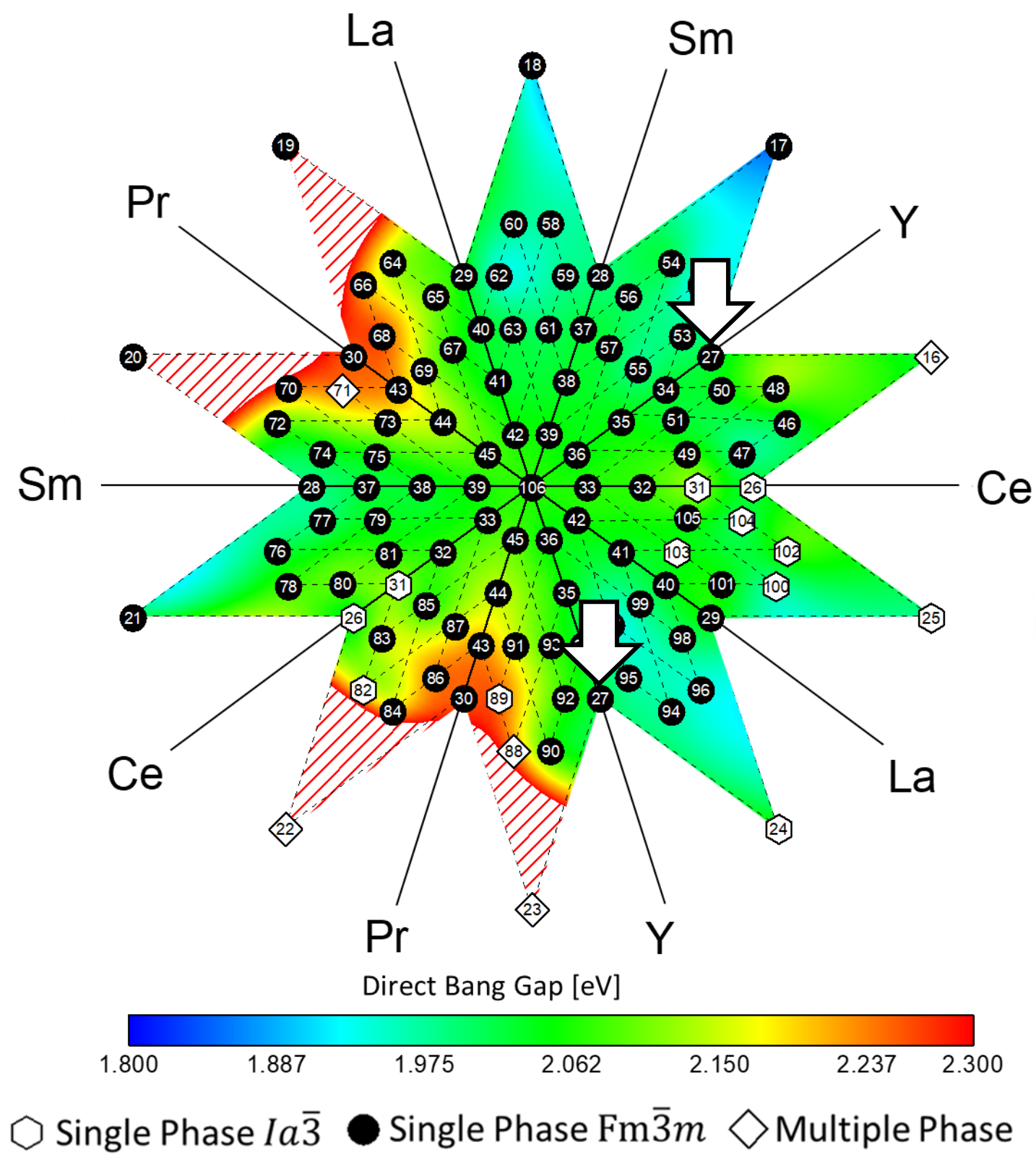
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



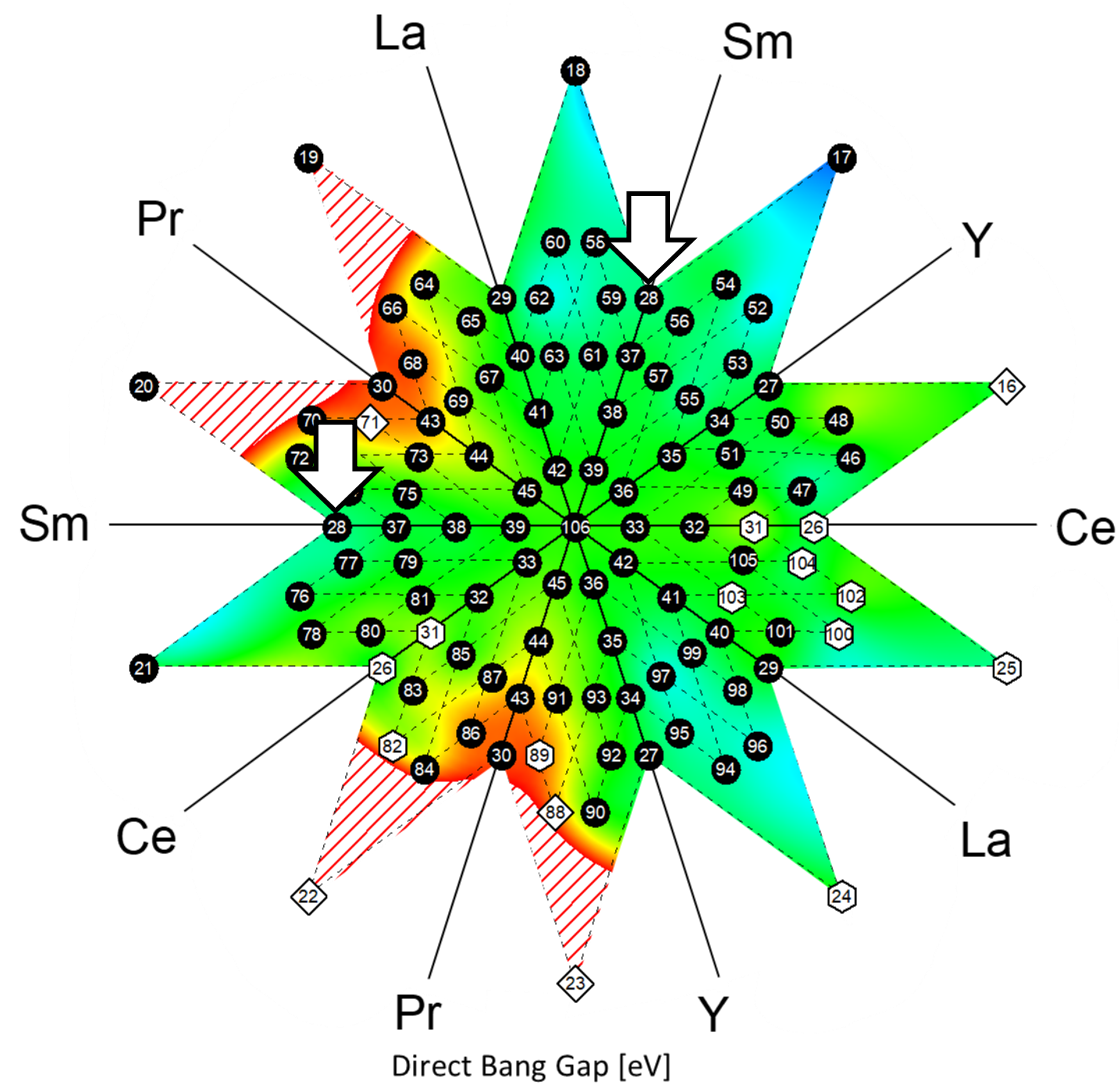
N.A.



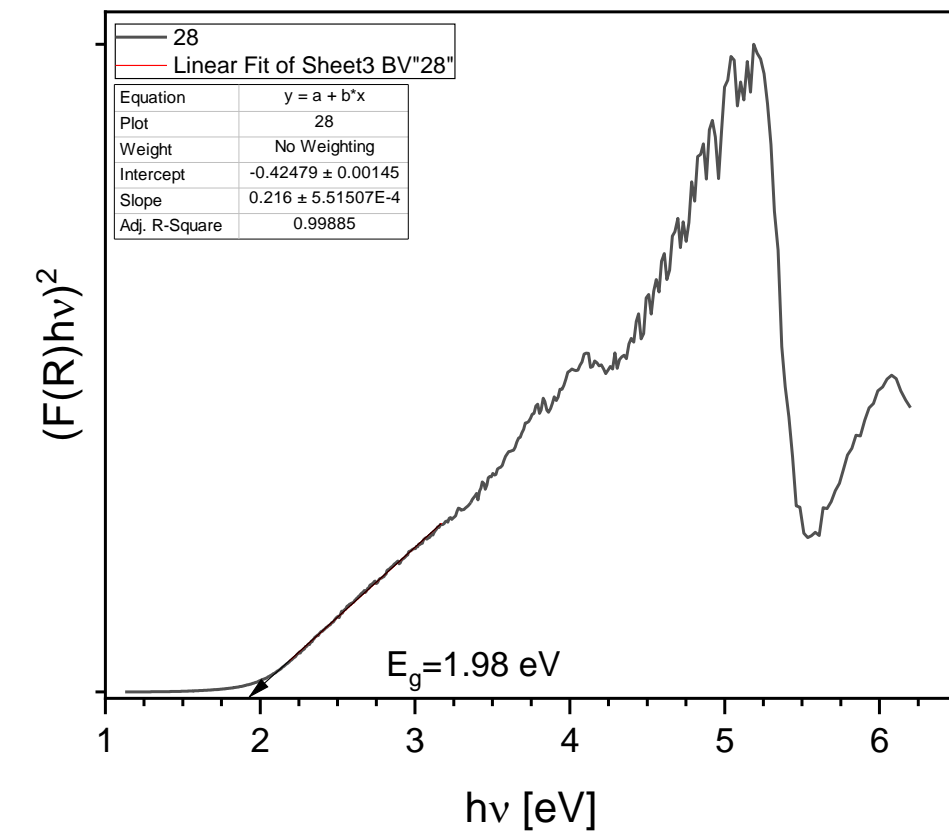
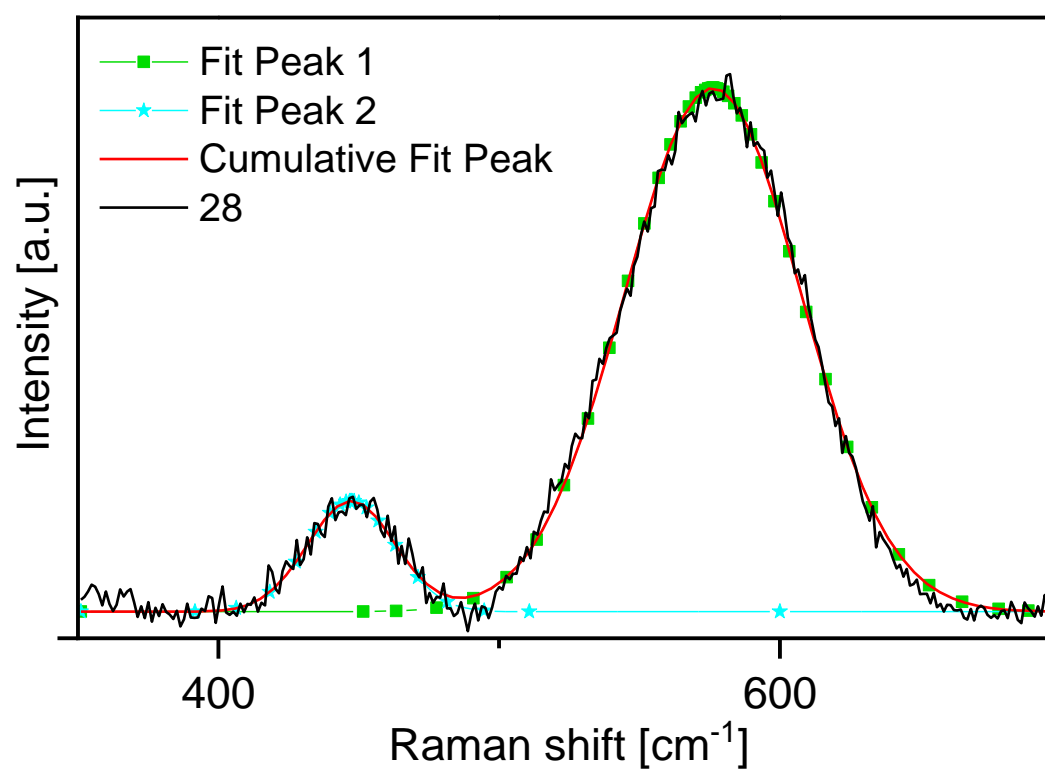
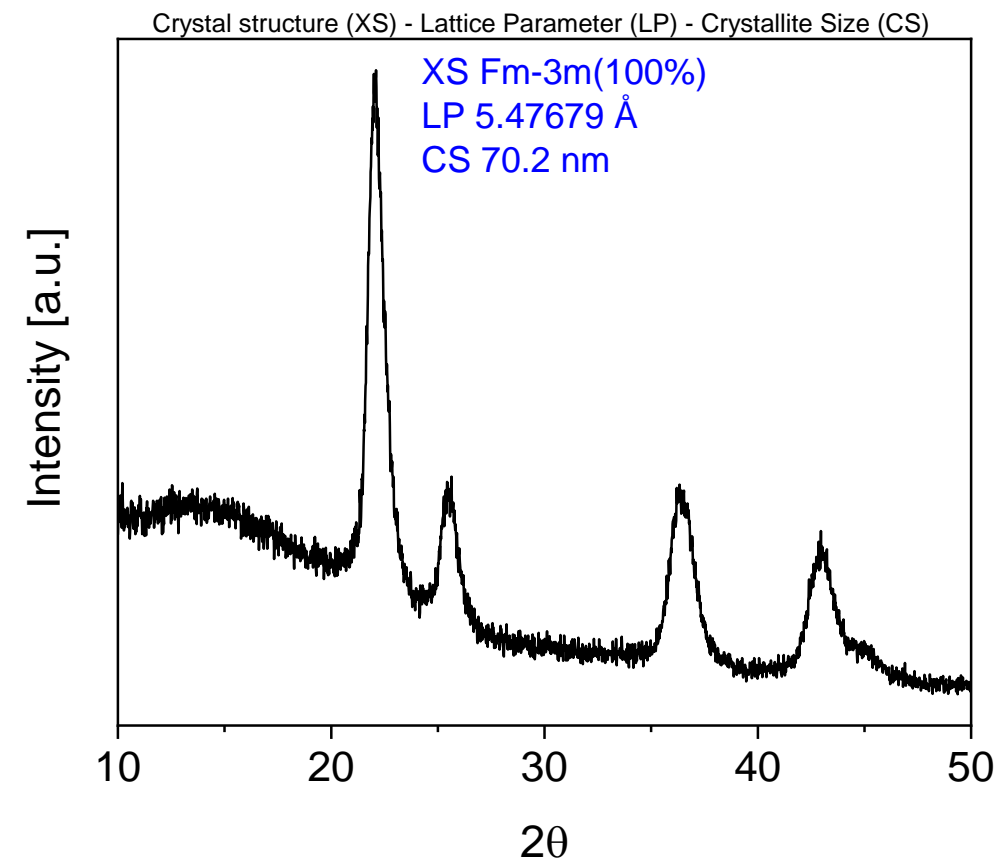
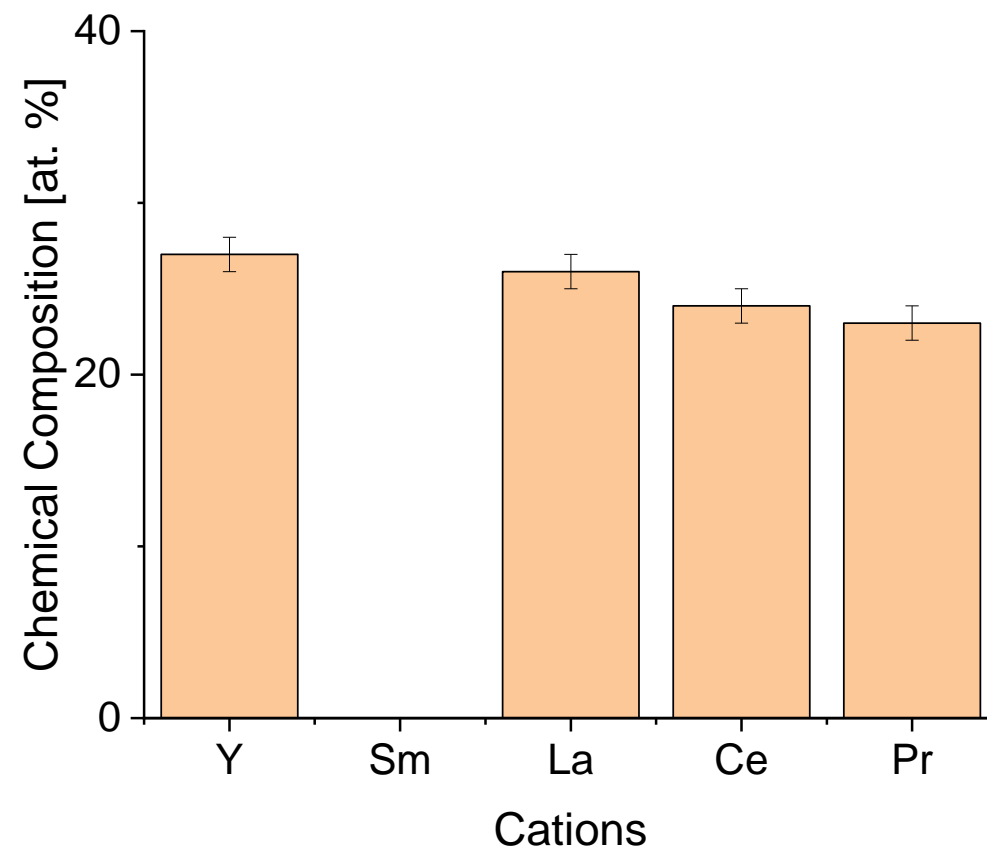
# Sample 27



# Sample 28

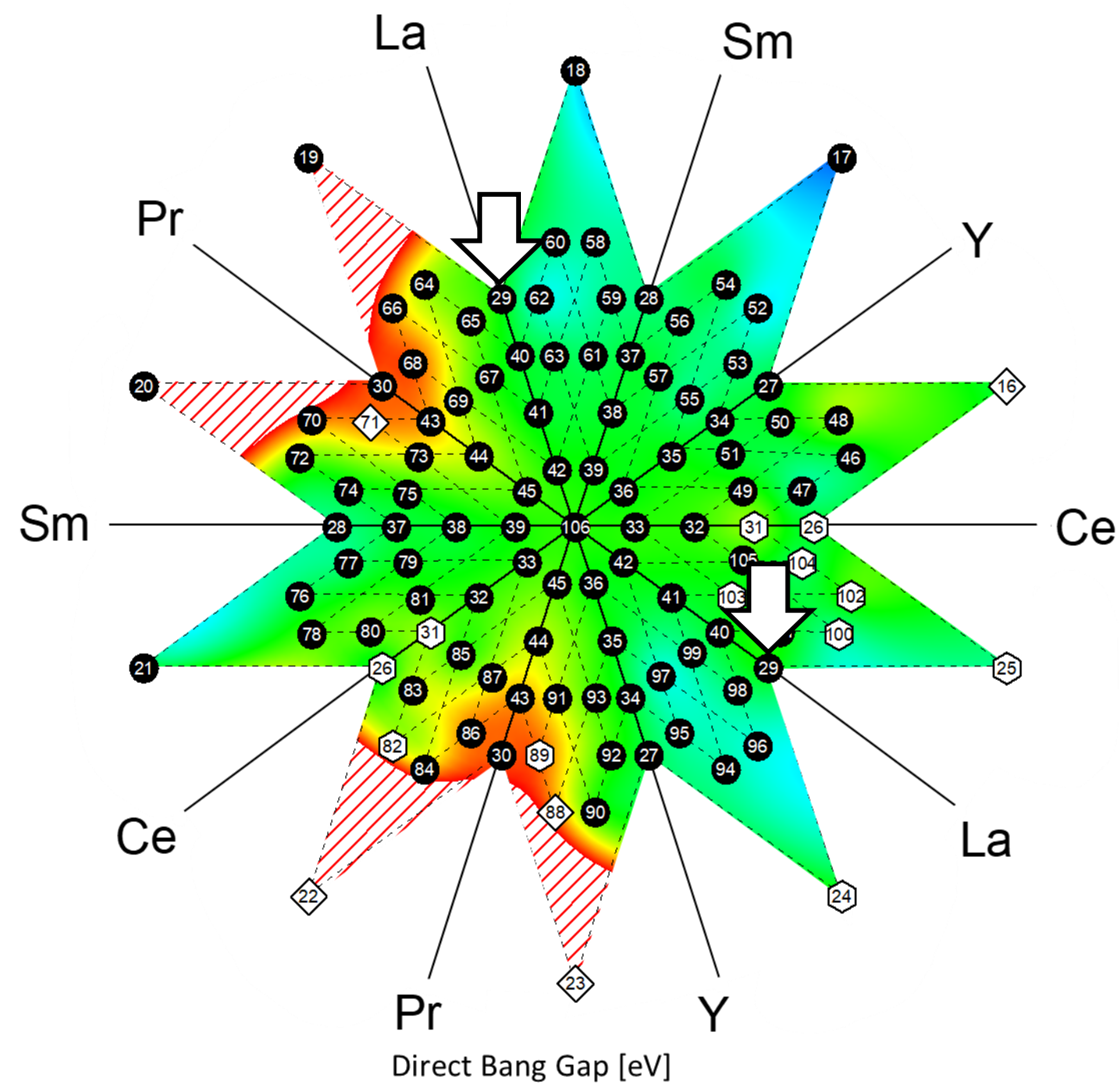


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

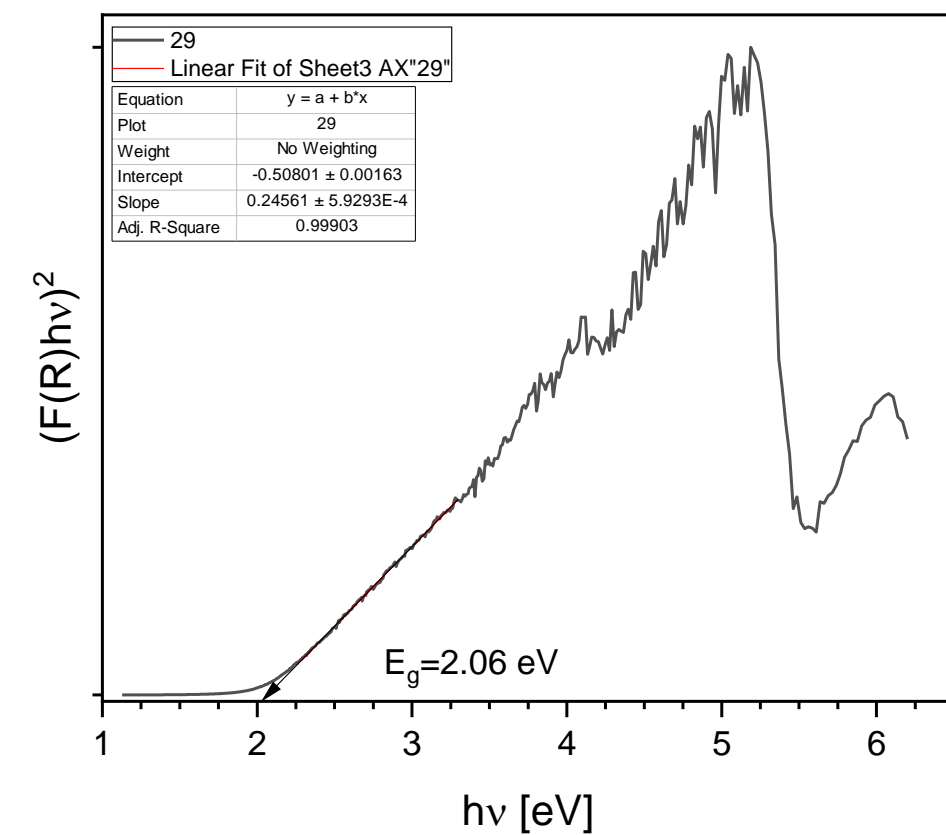
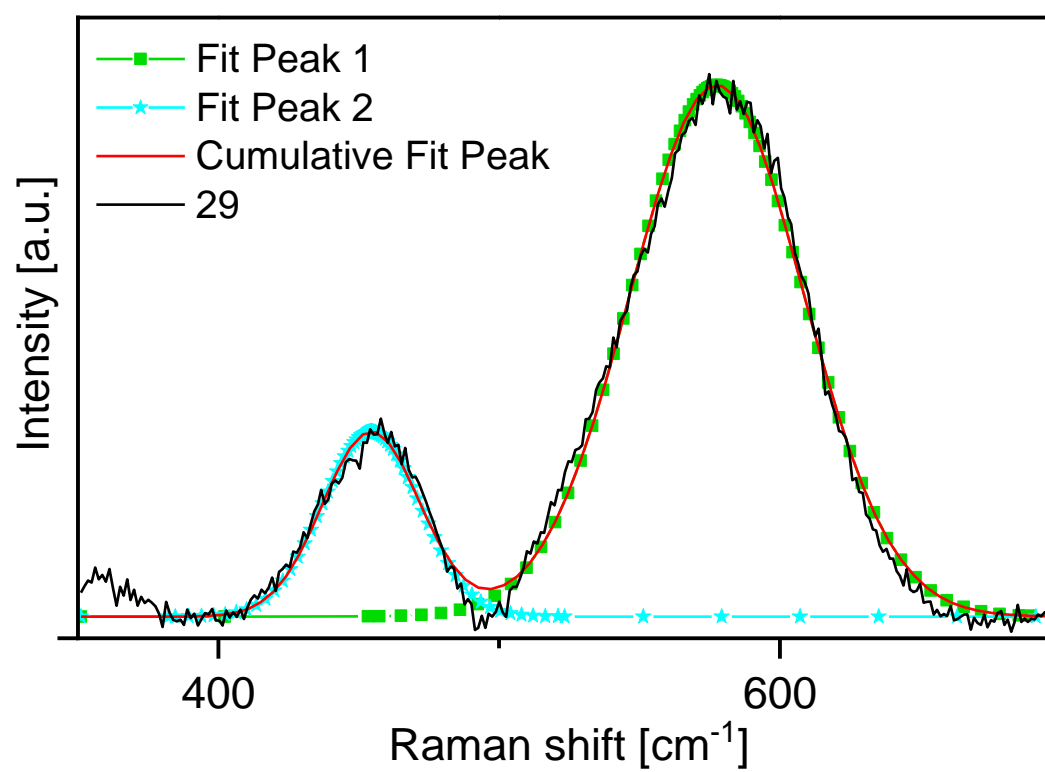
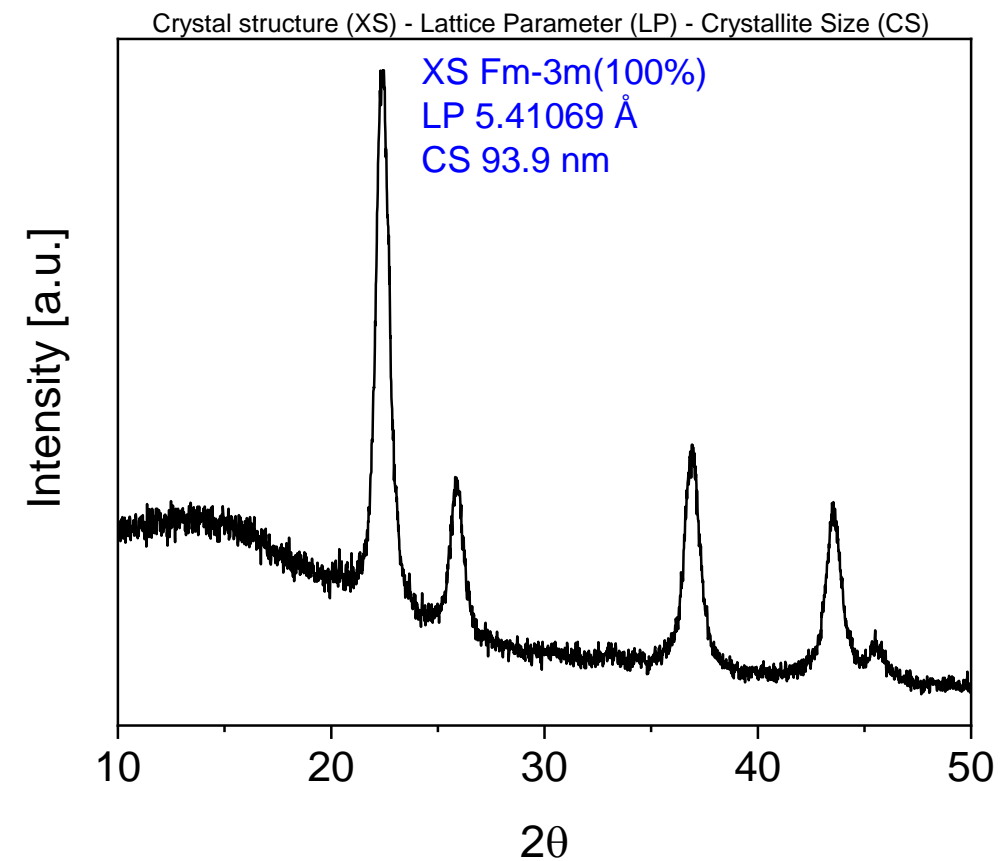
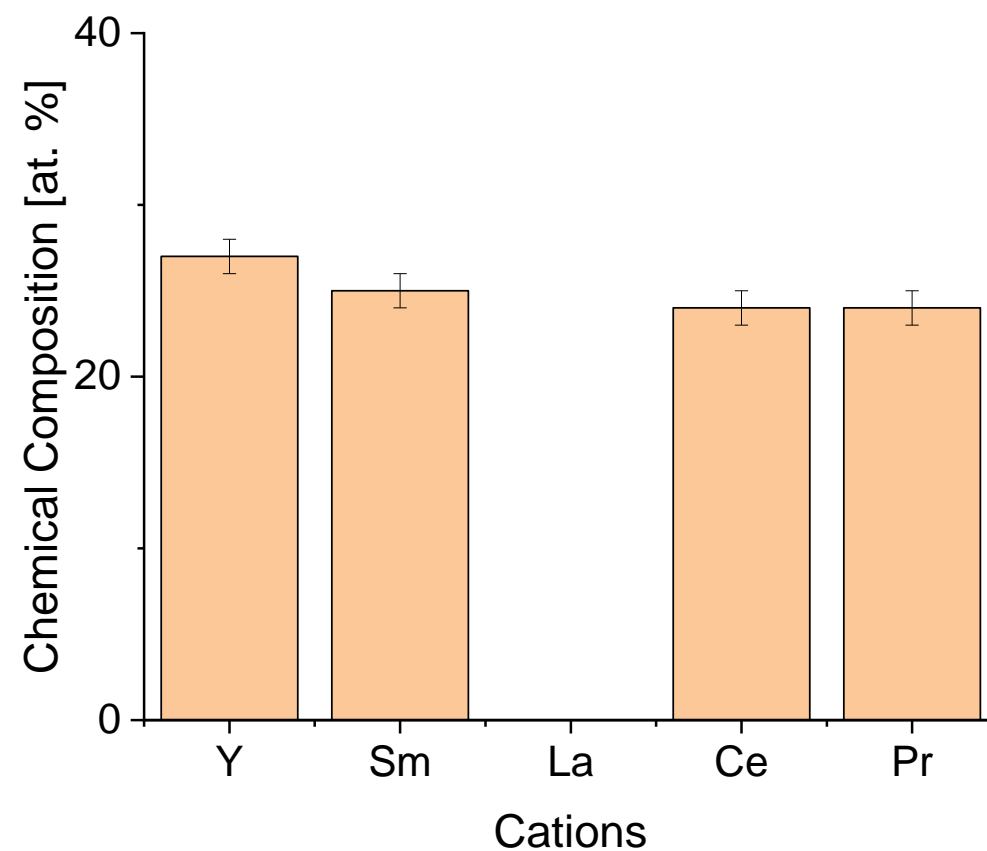




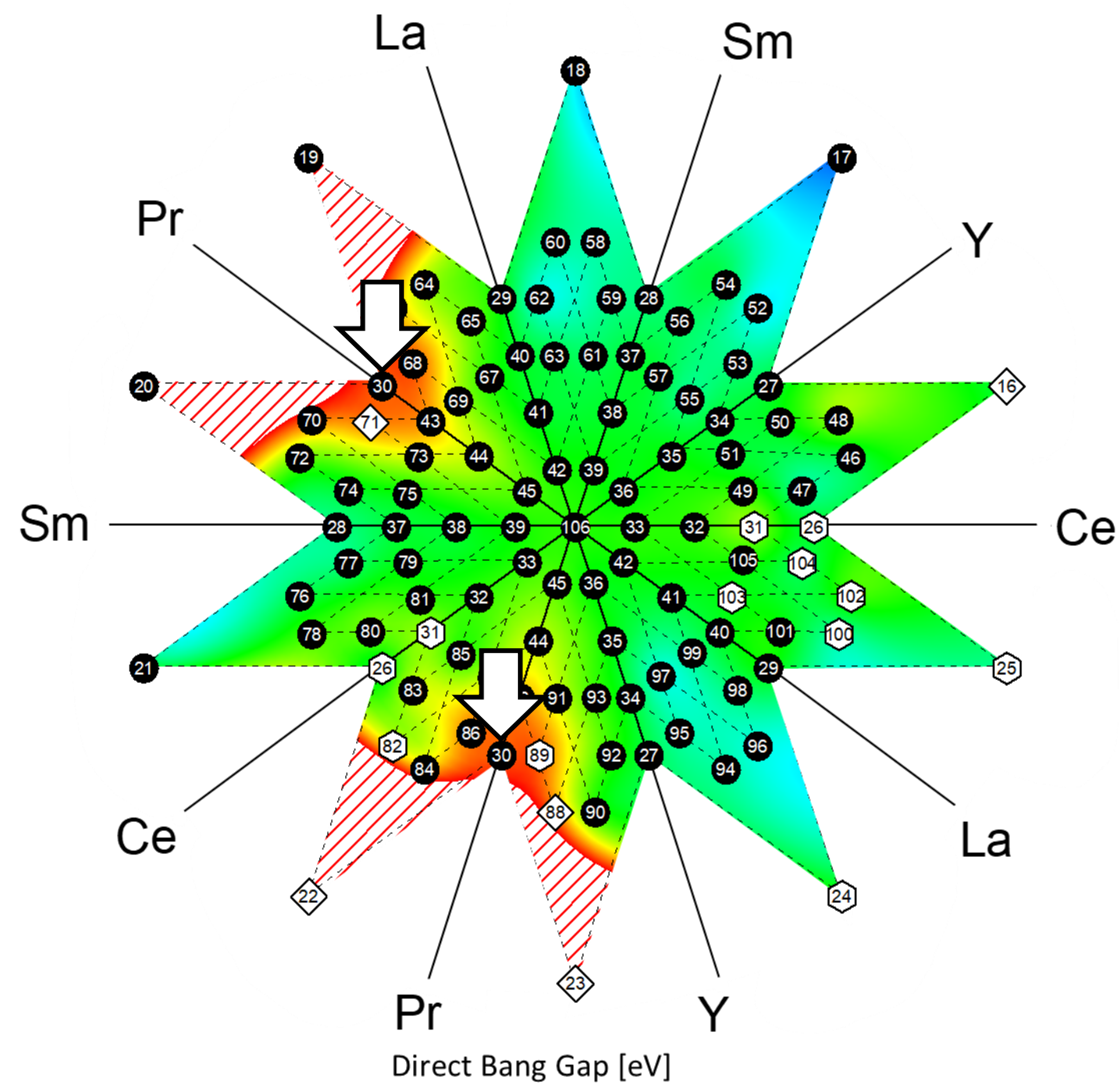
# Sample 29



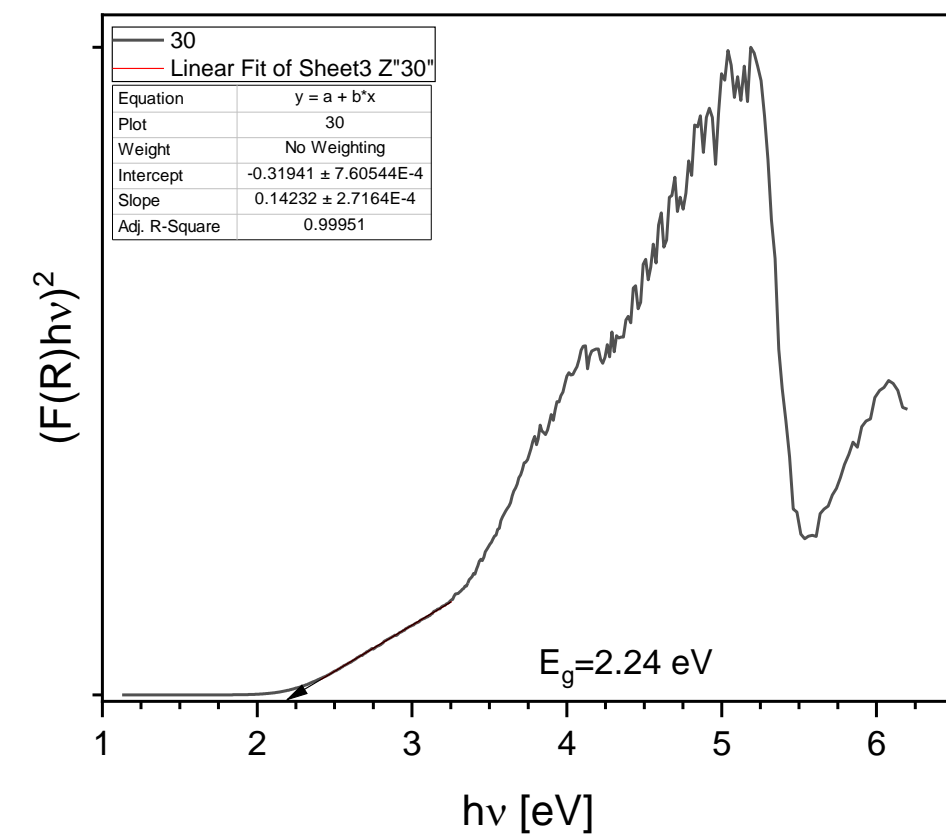
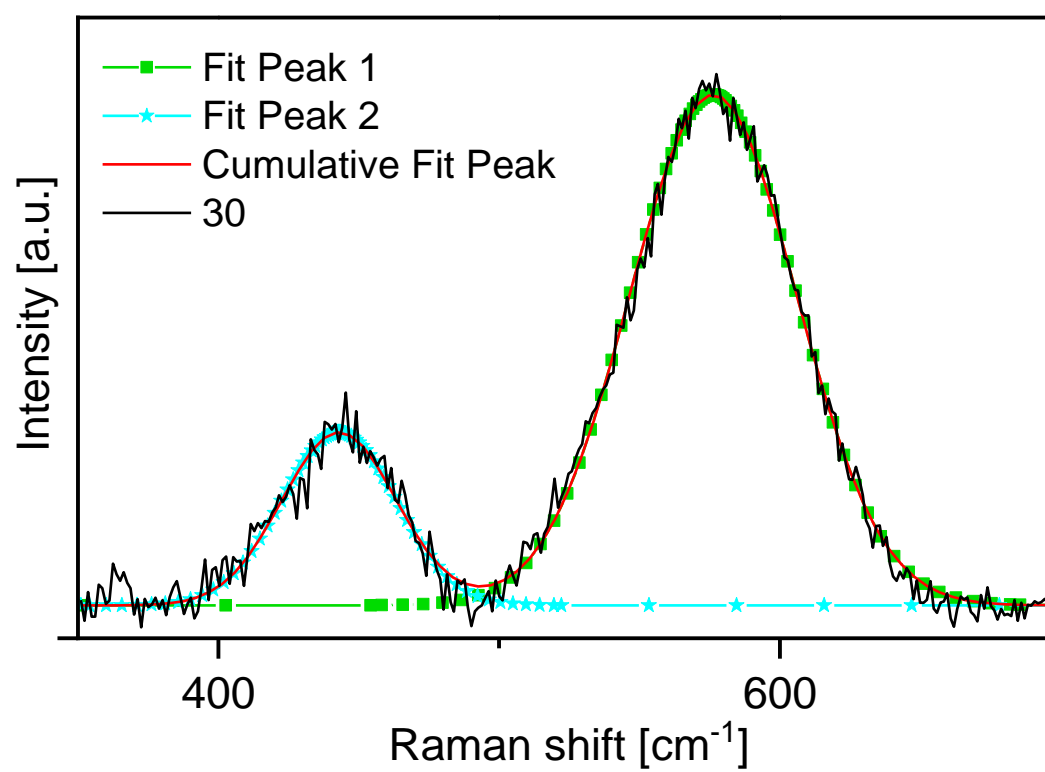
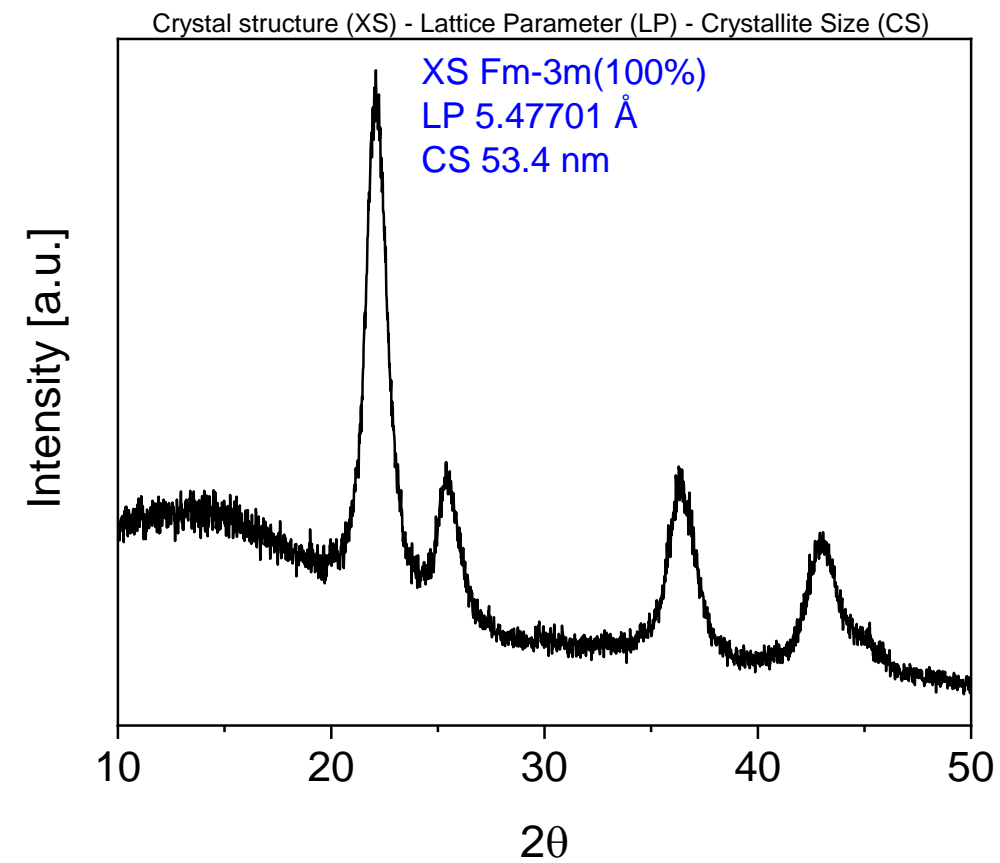
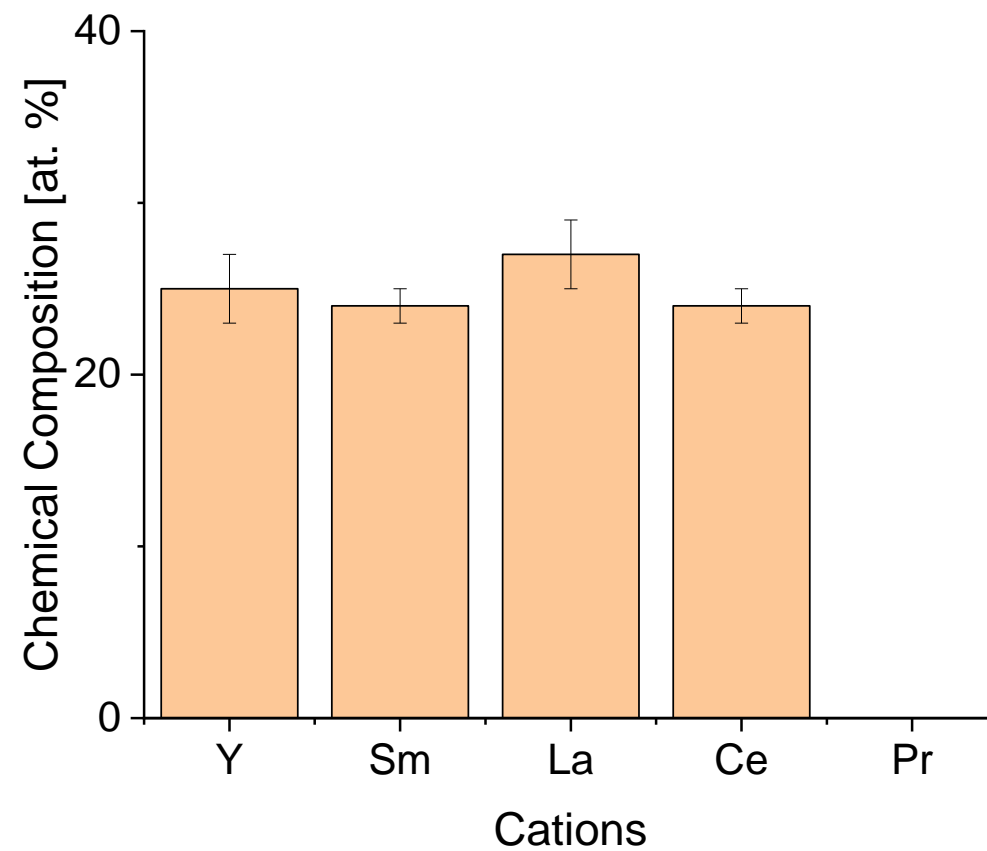
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



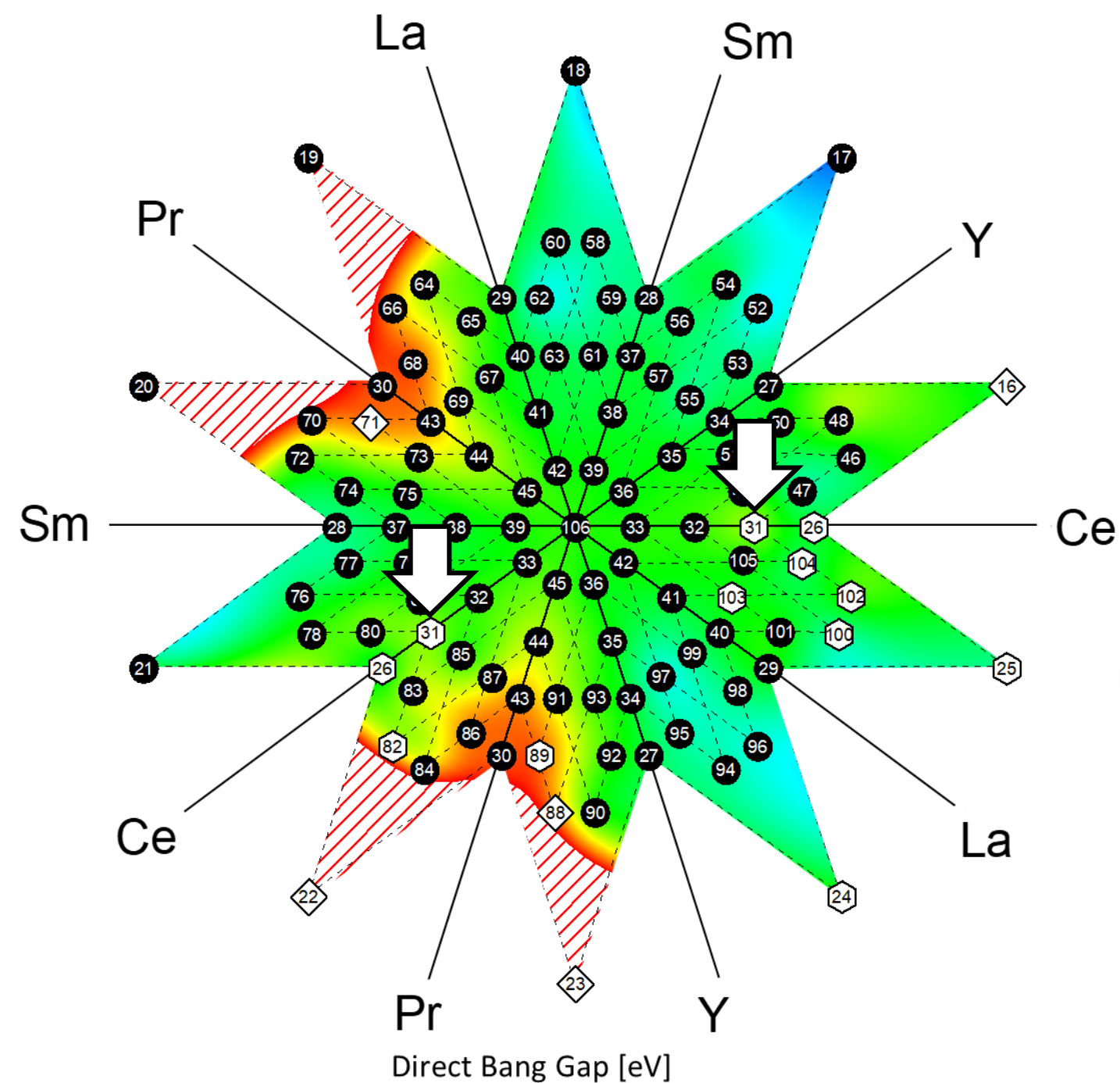
# Sample 30



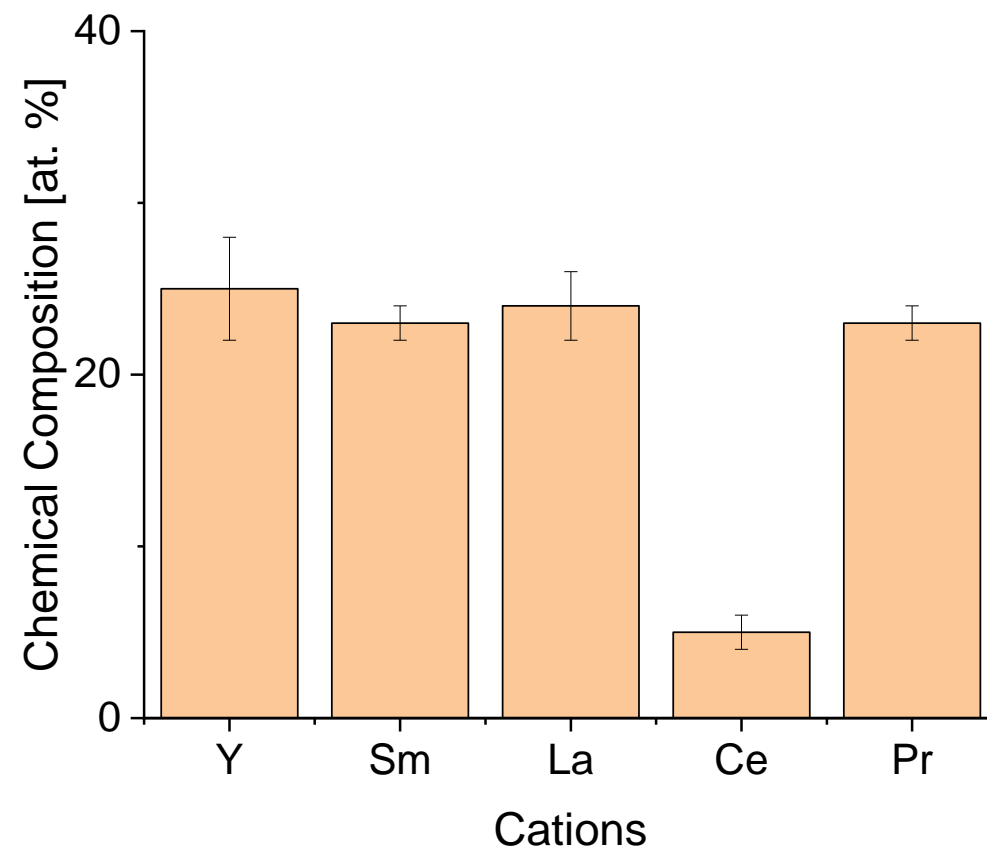
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



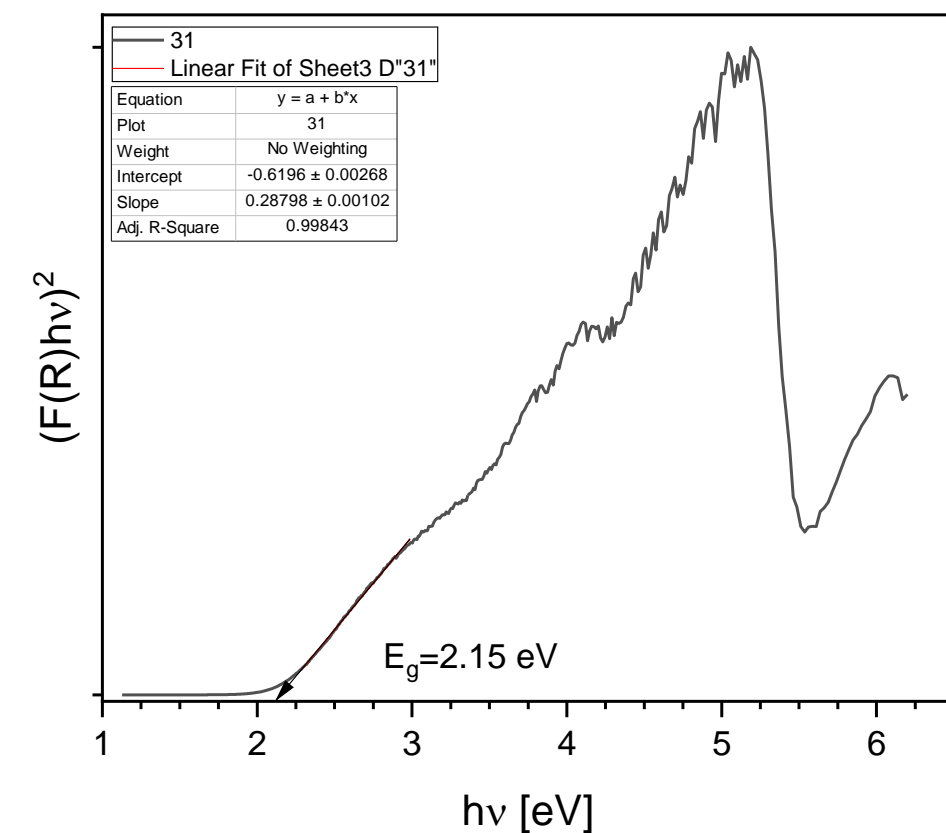
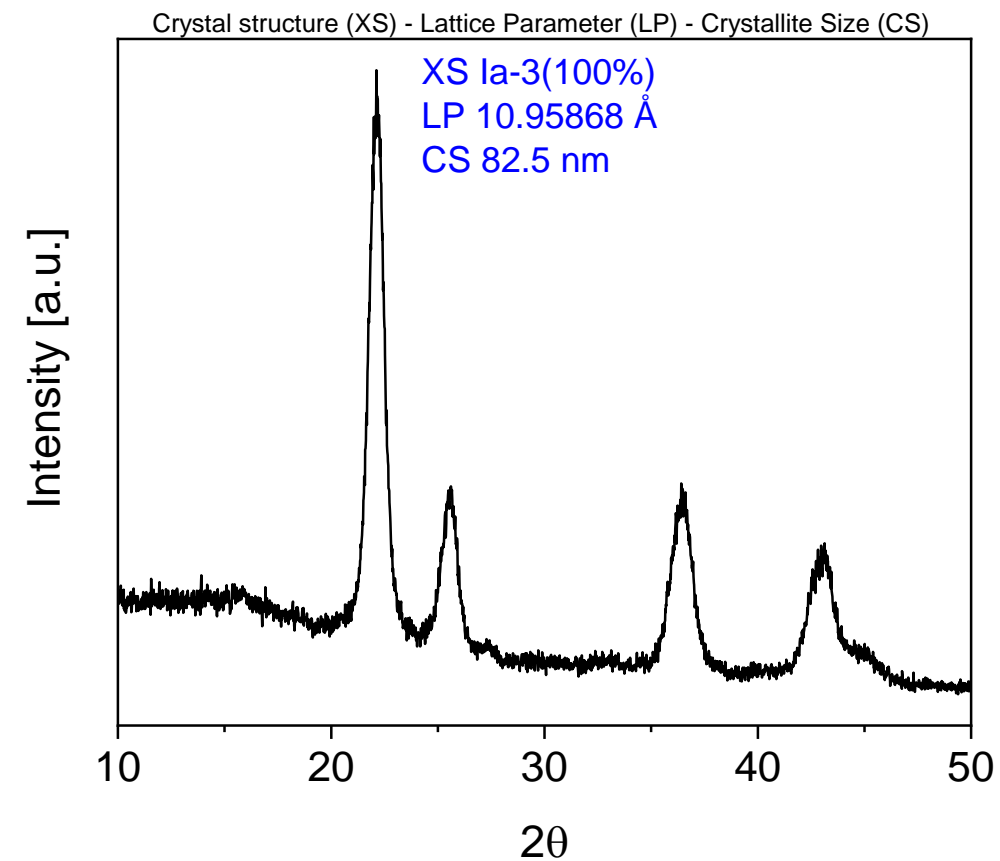
# Sample 31



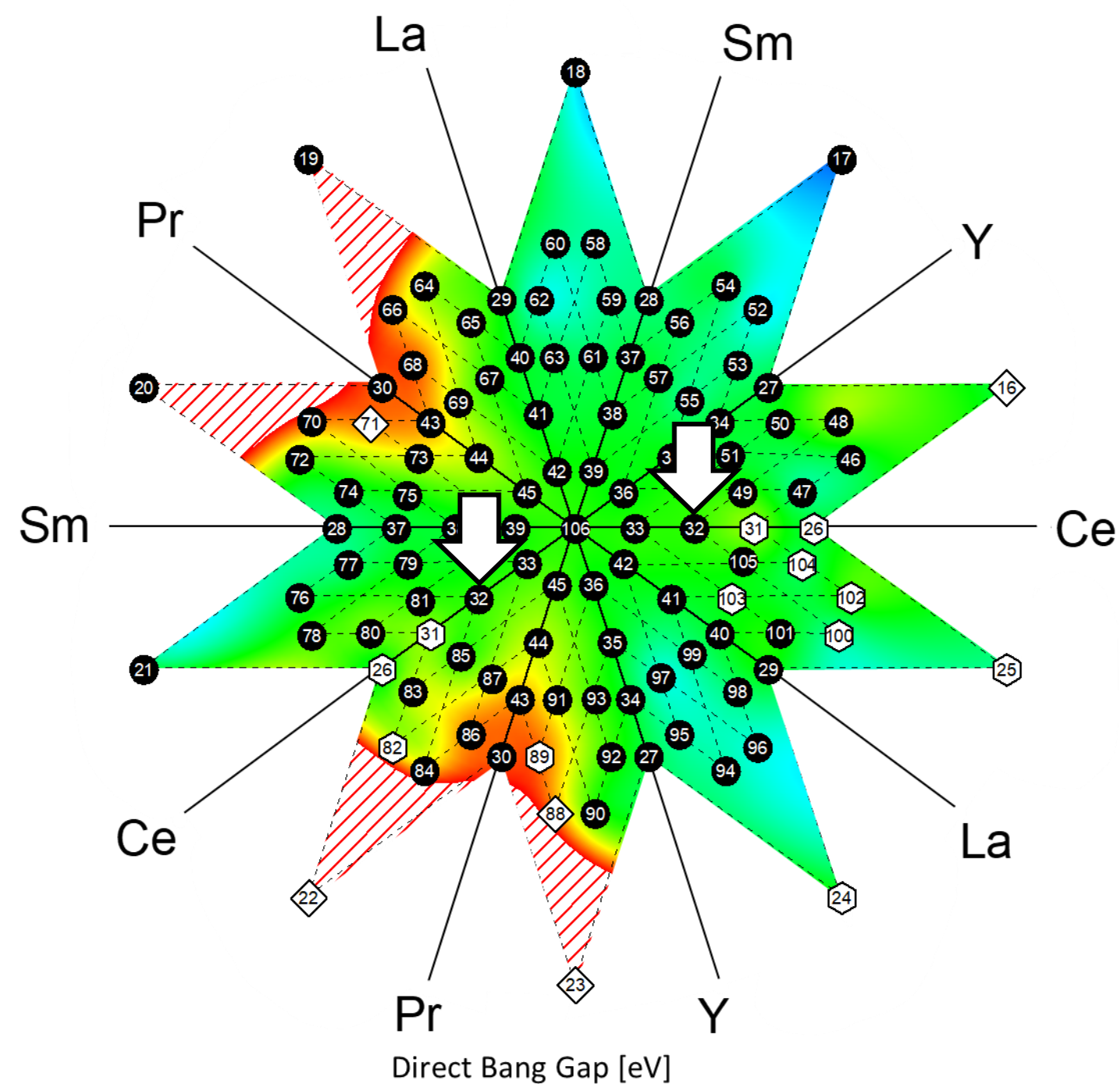
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



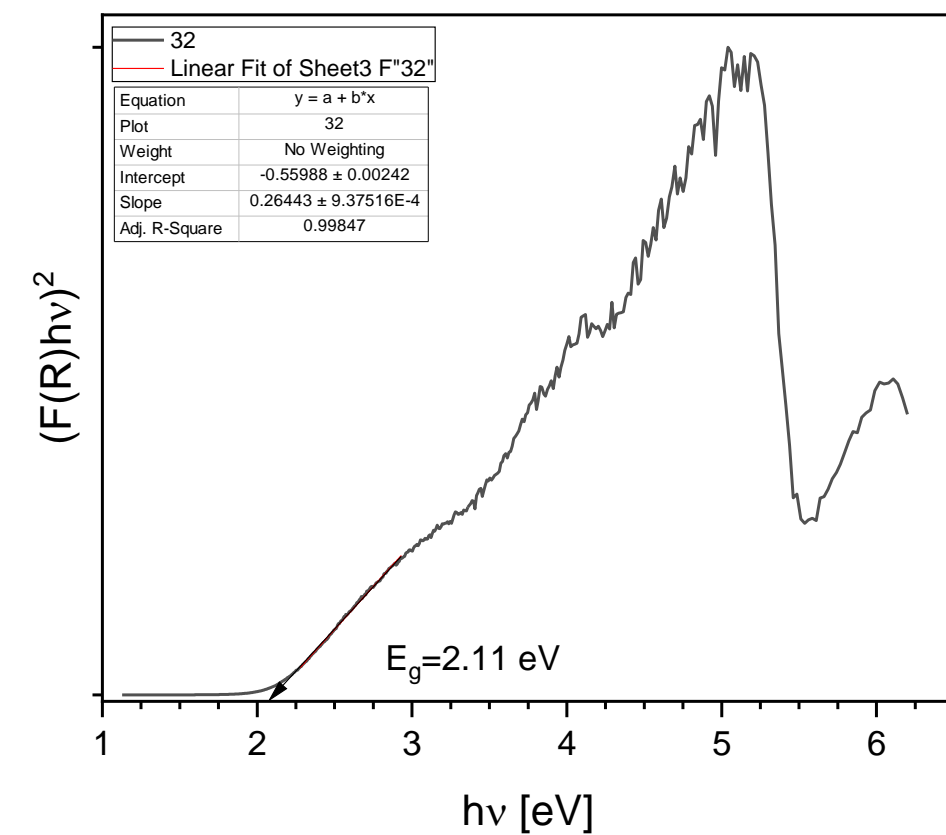
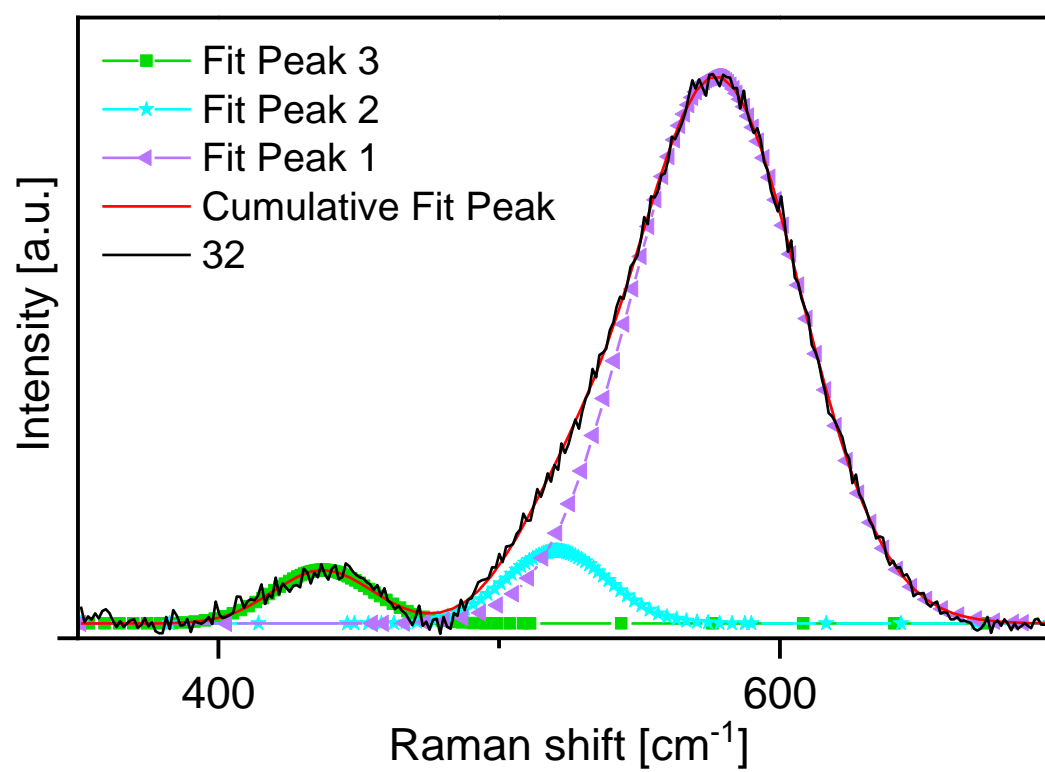
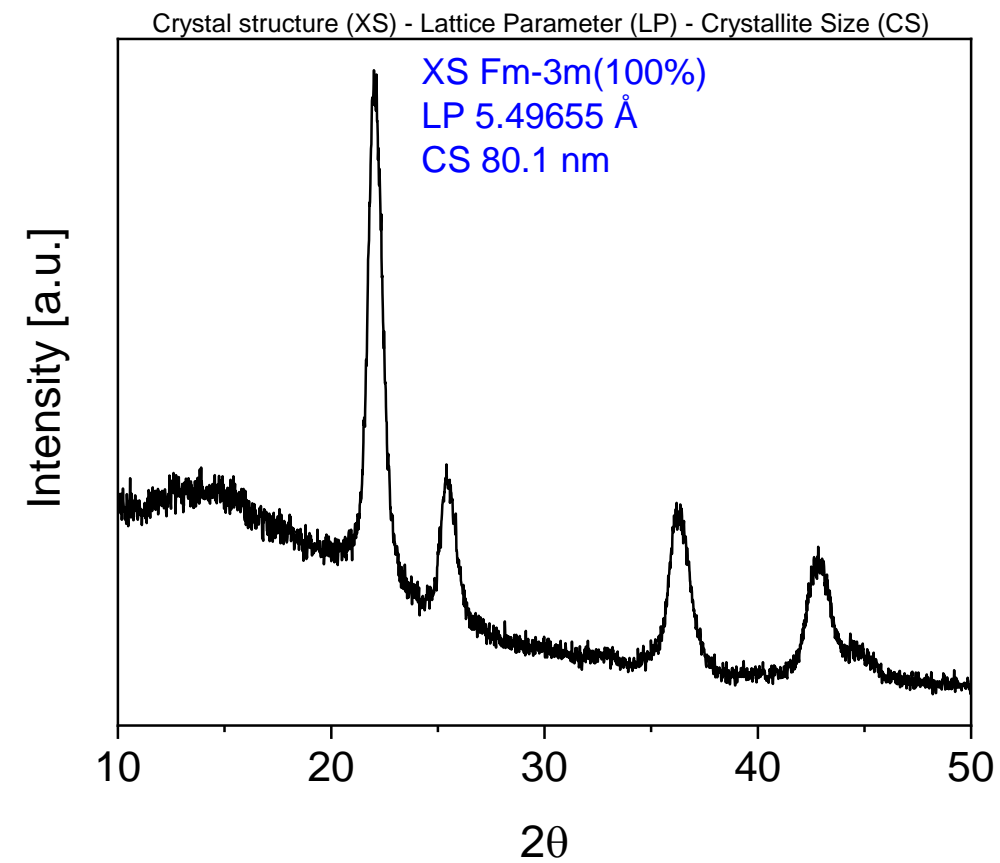
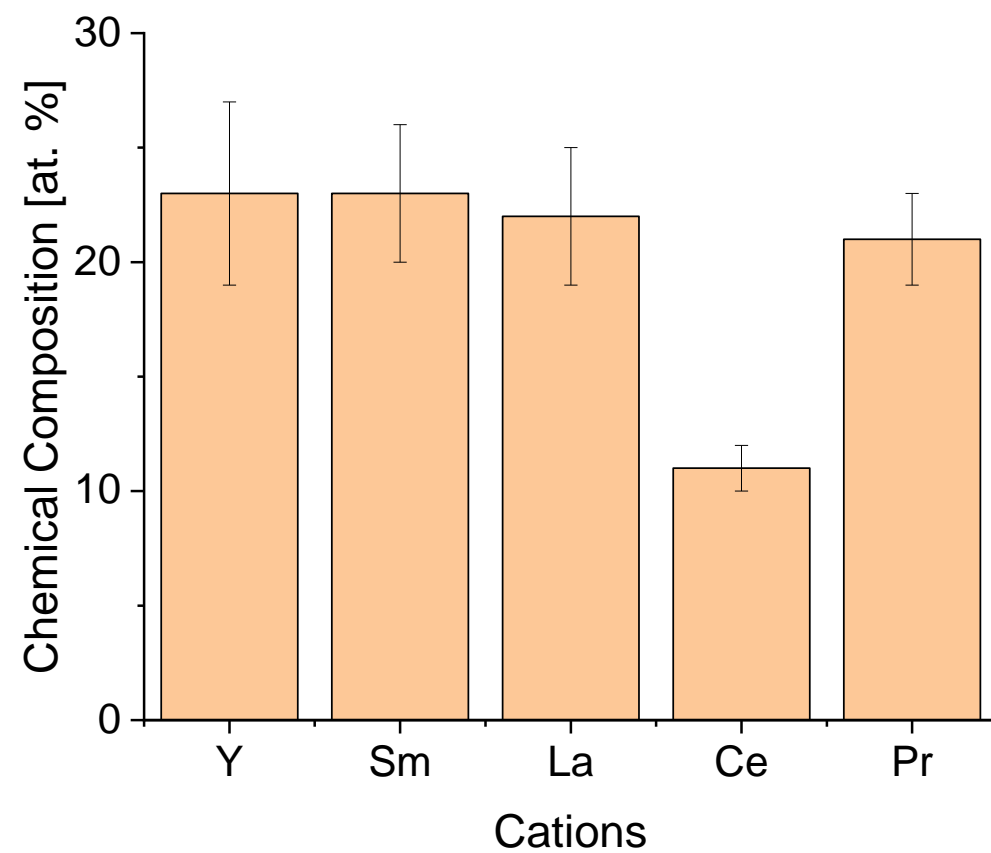
N.A.



# Sample 32

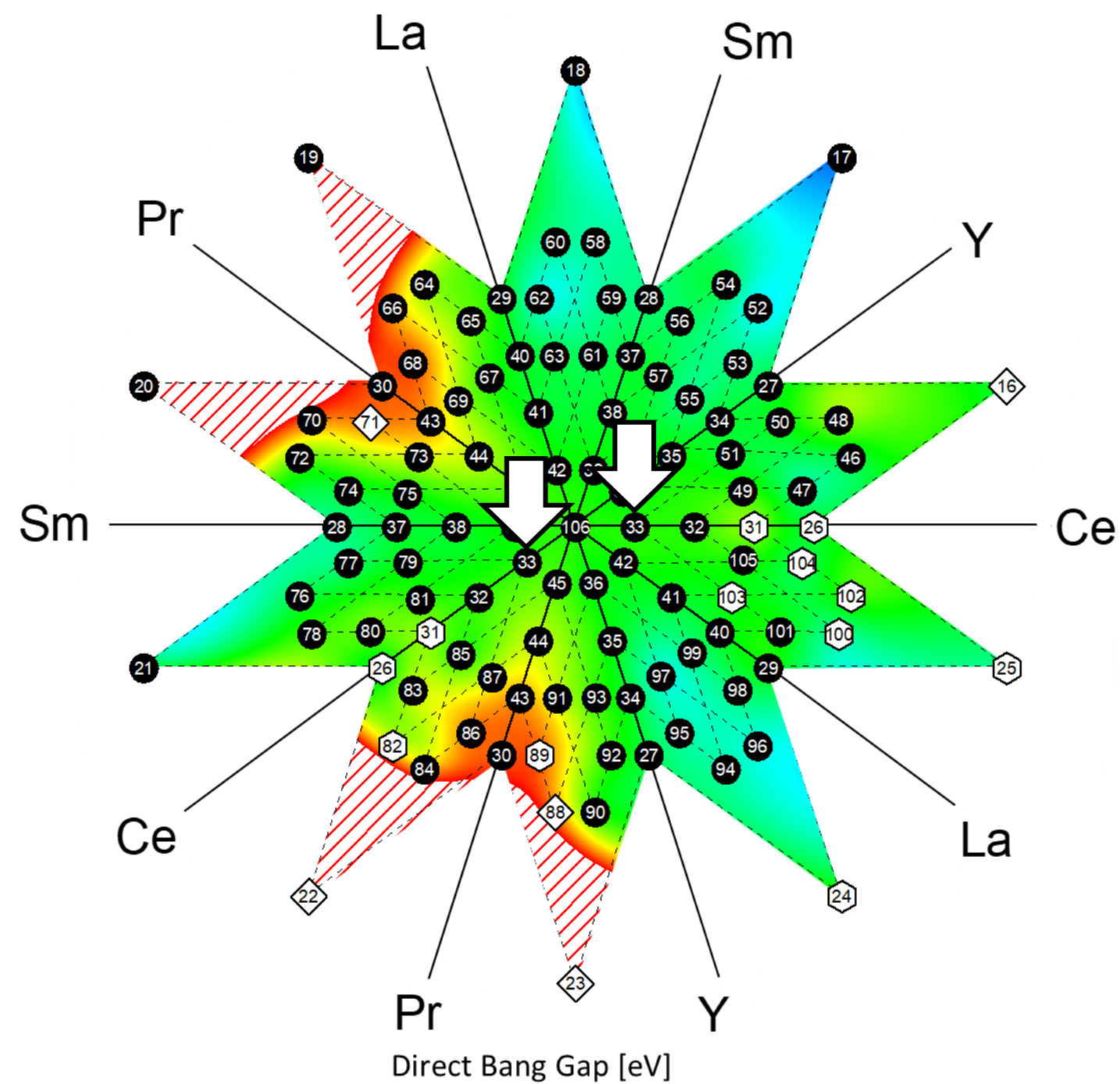


○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◇ Multiple Phase

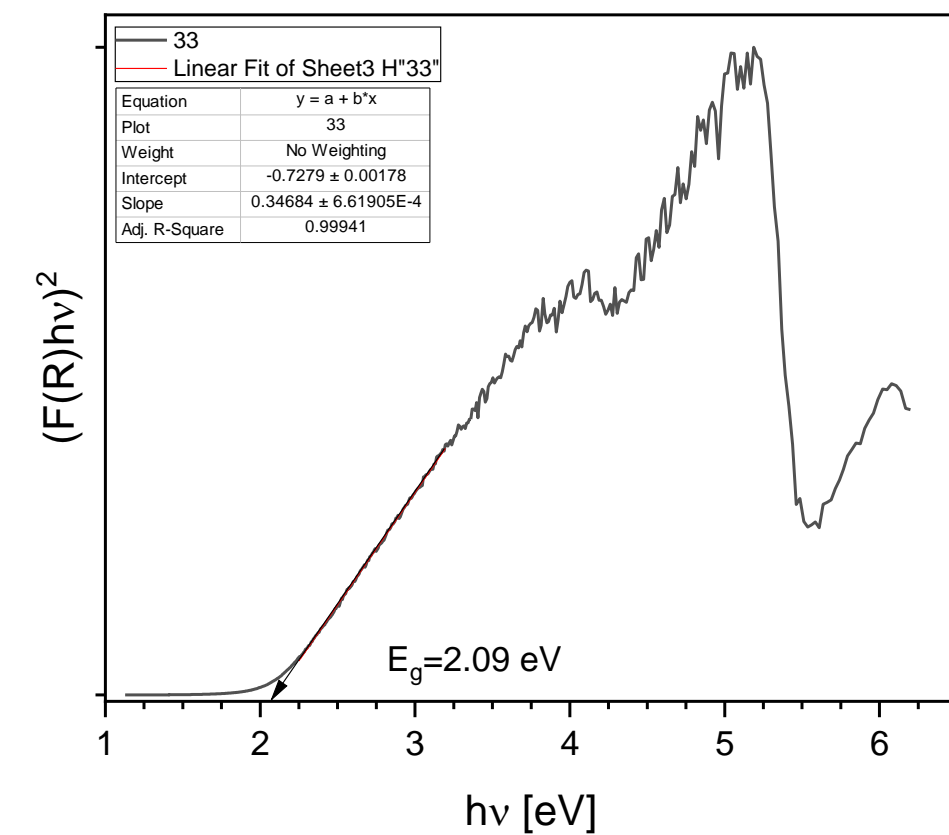
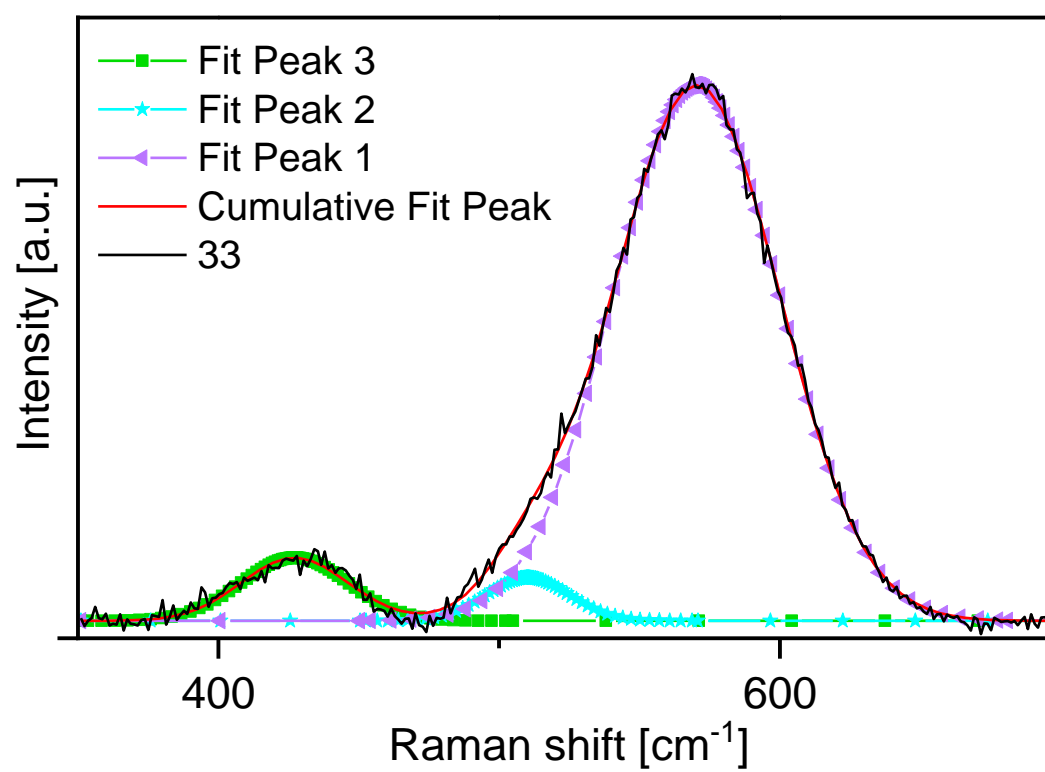
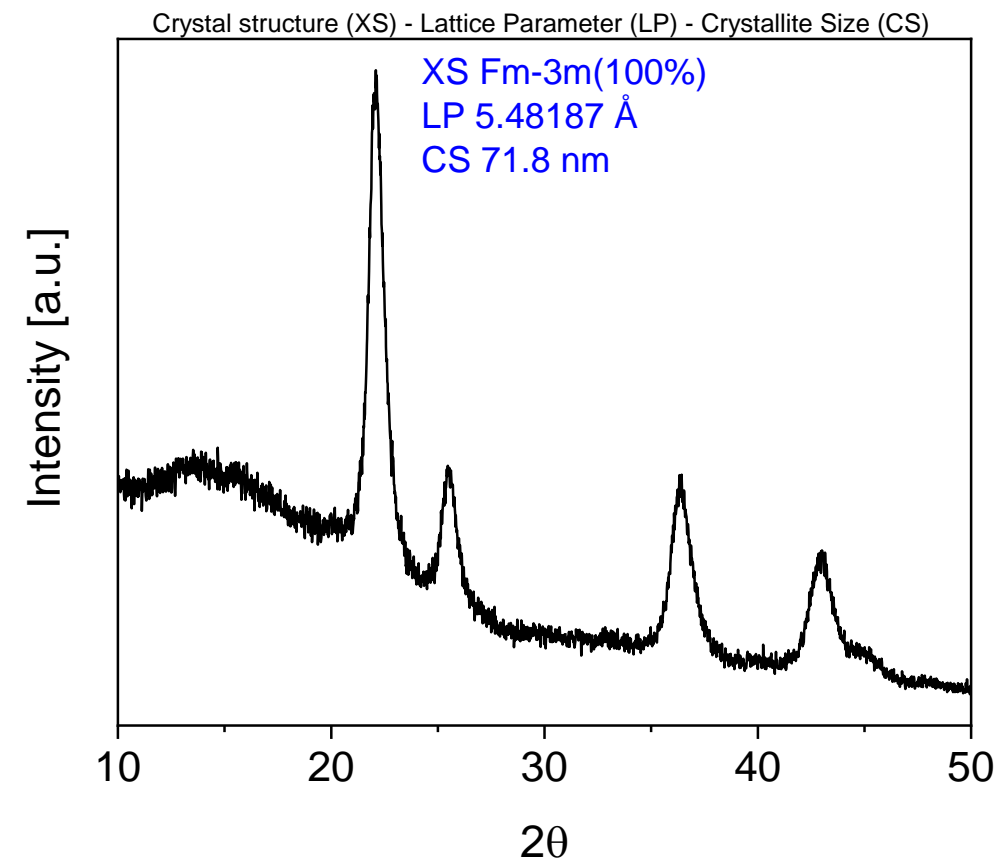
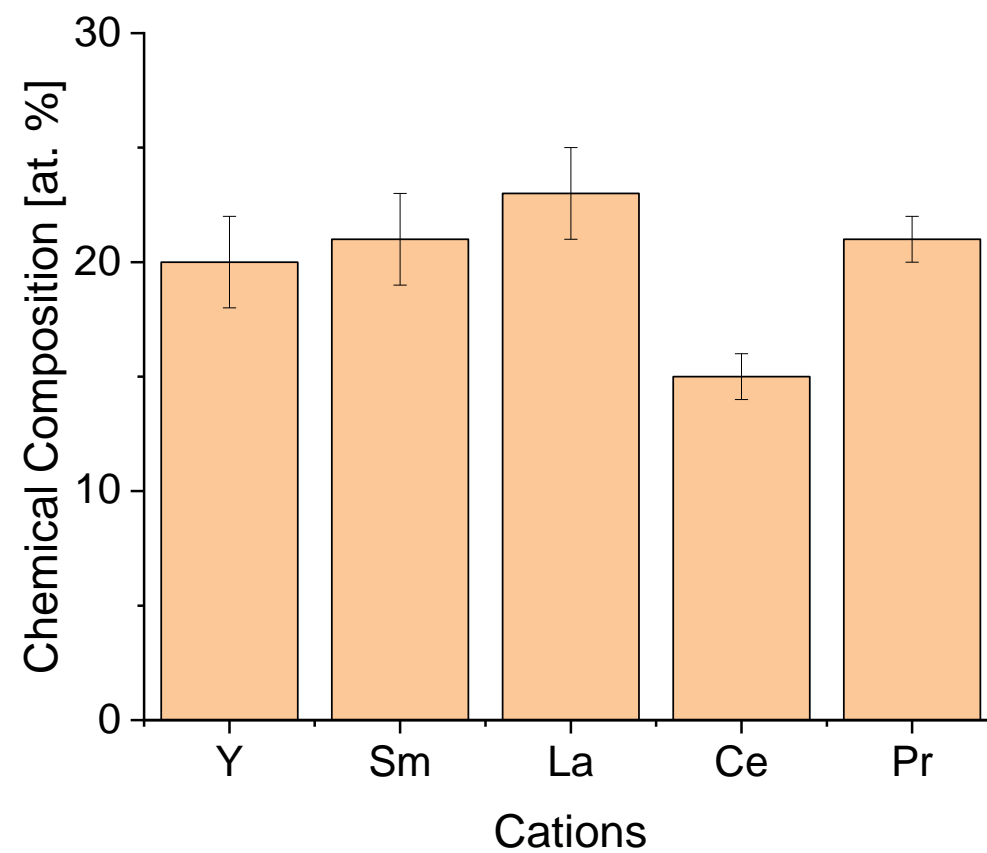




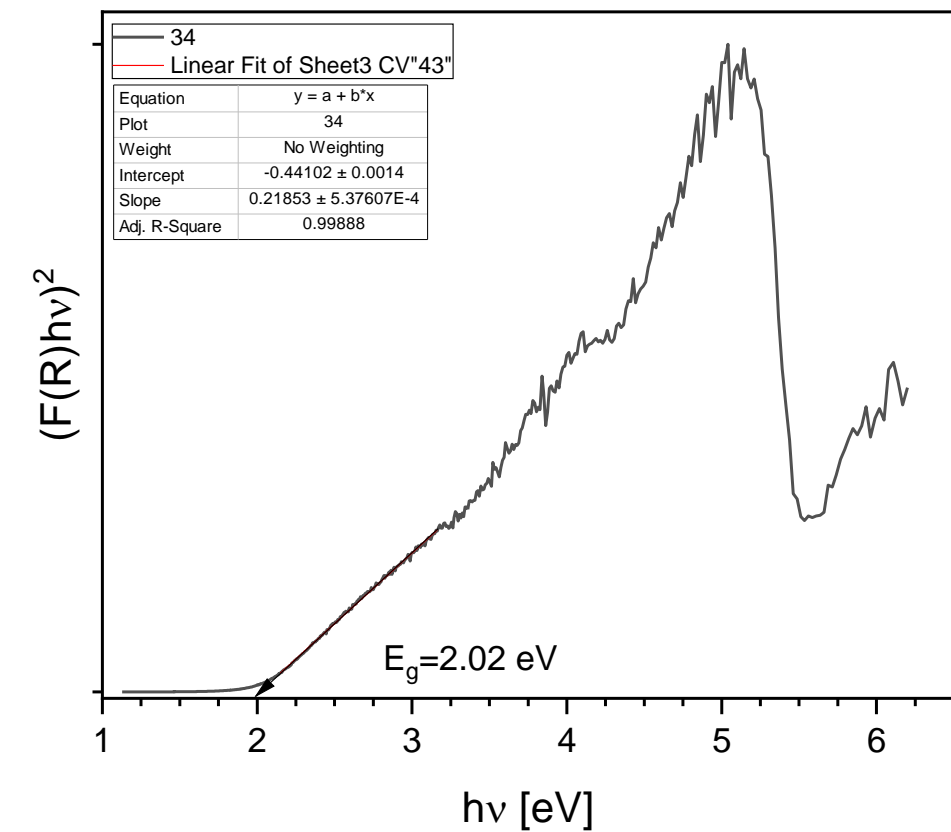
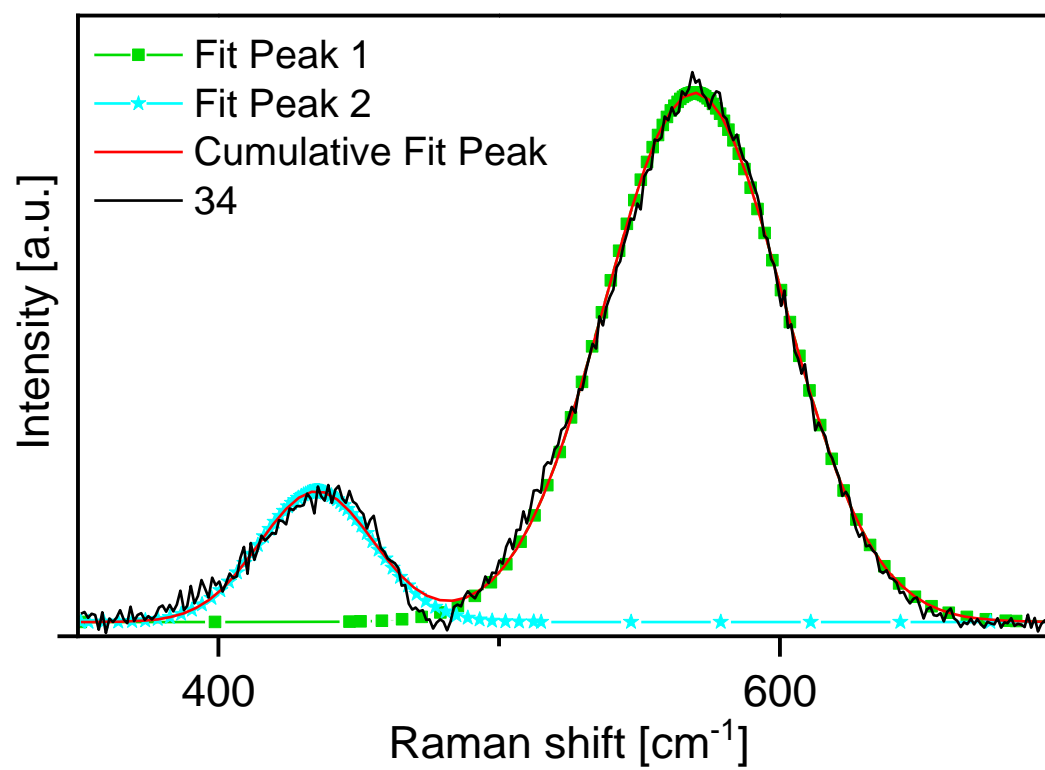
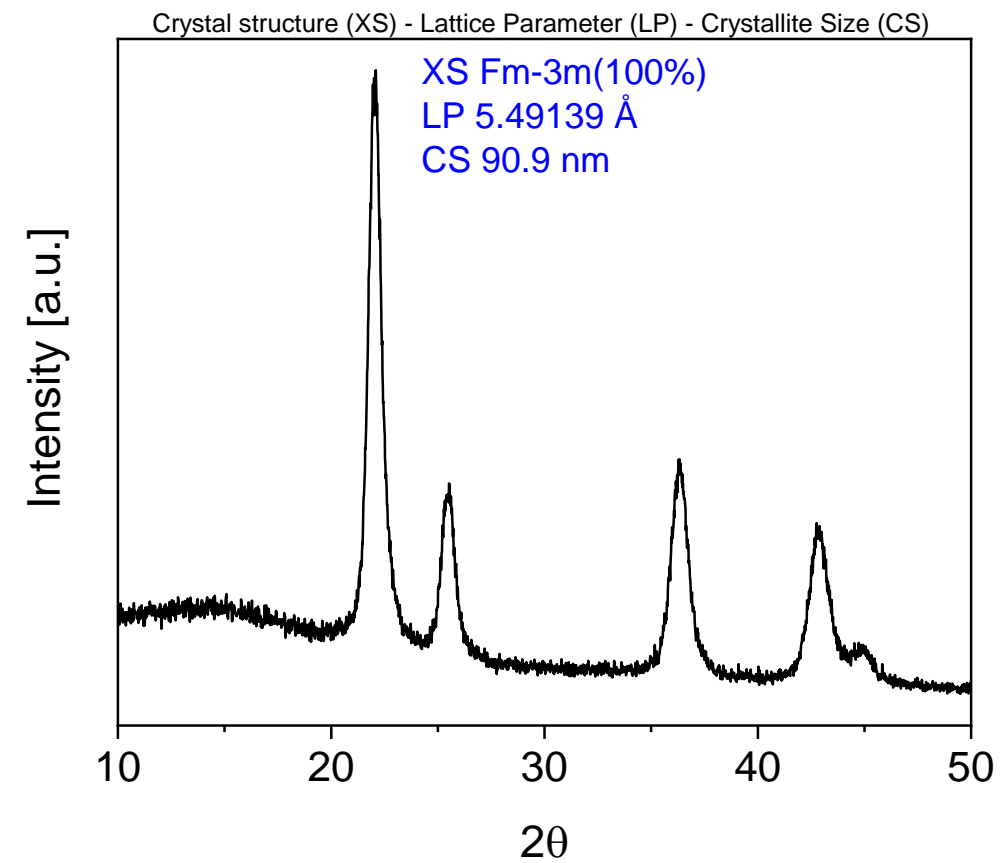
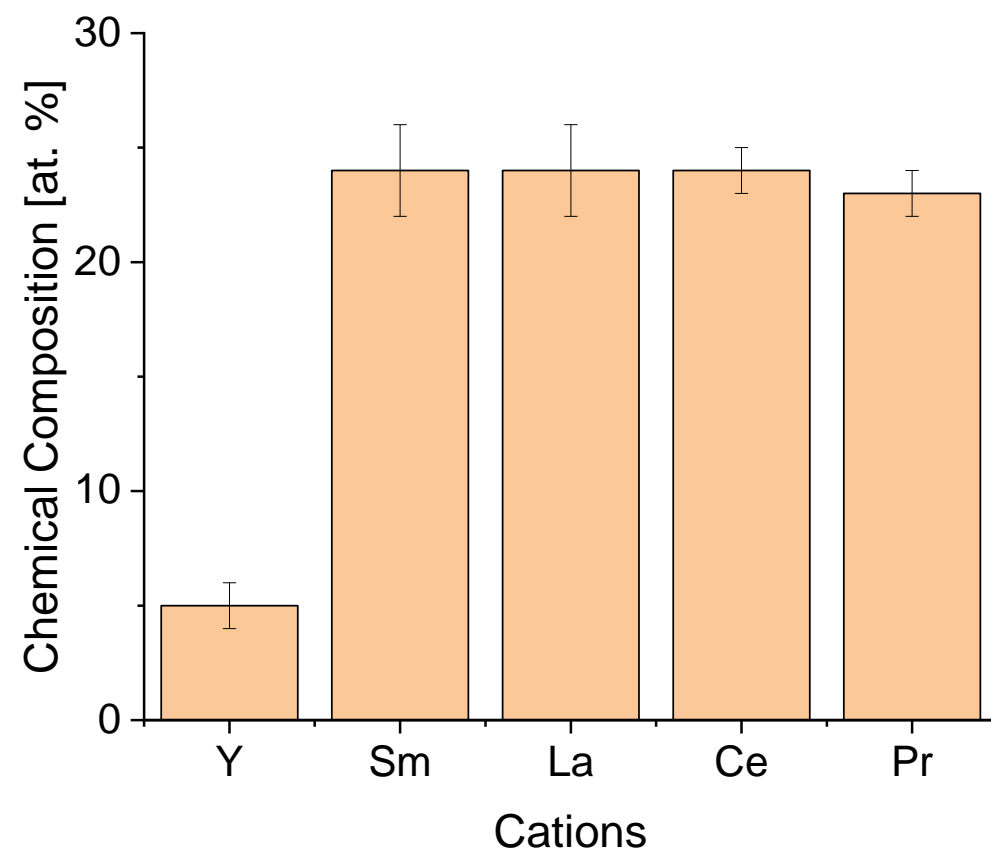
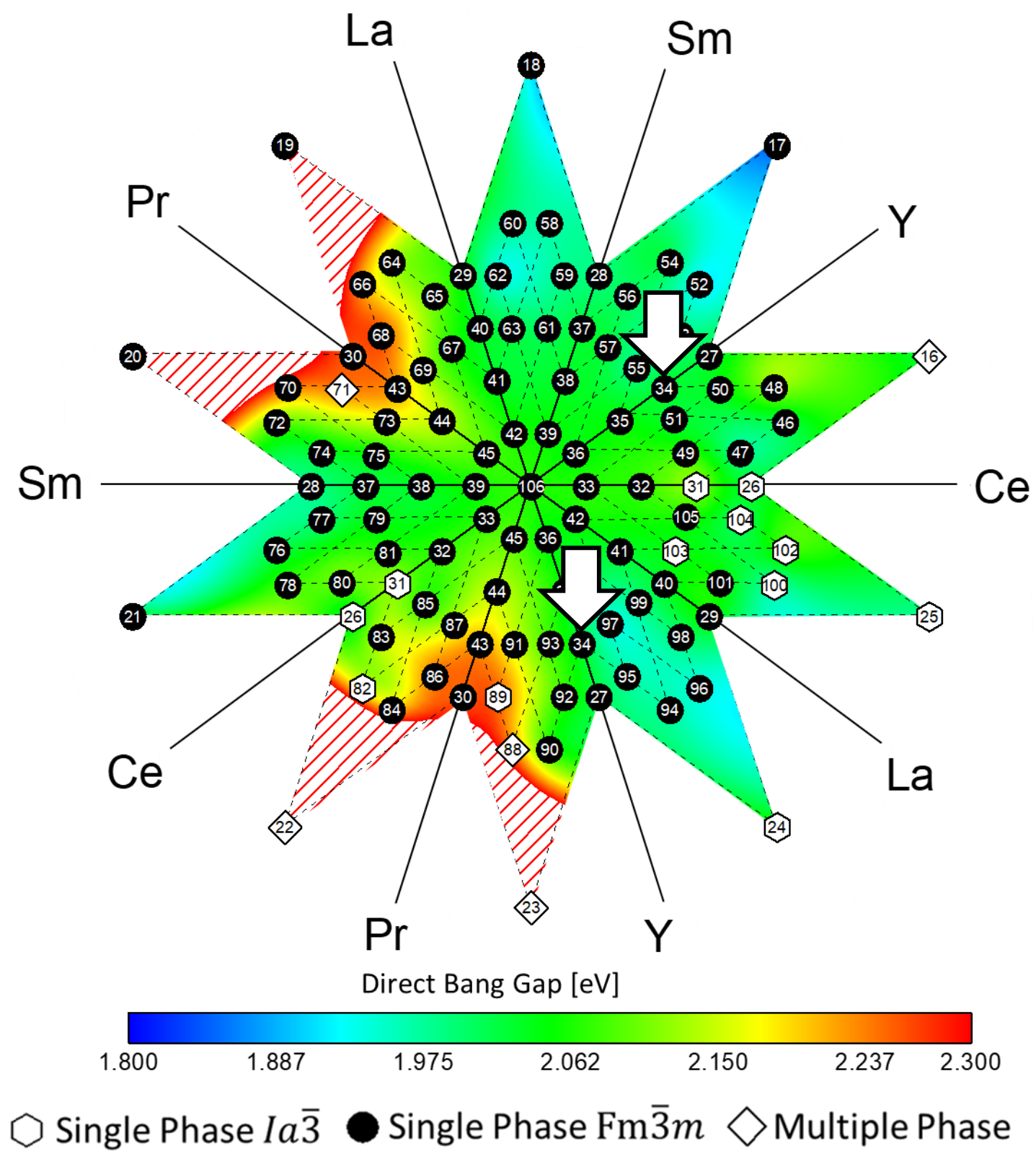
# Sample 33



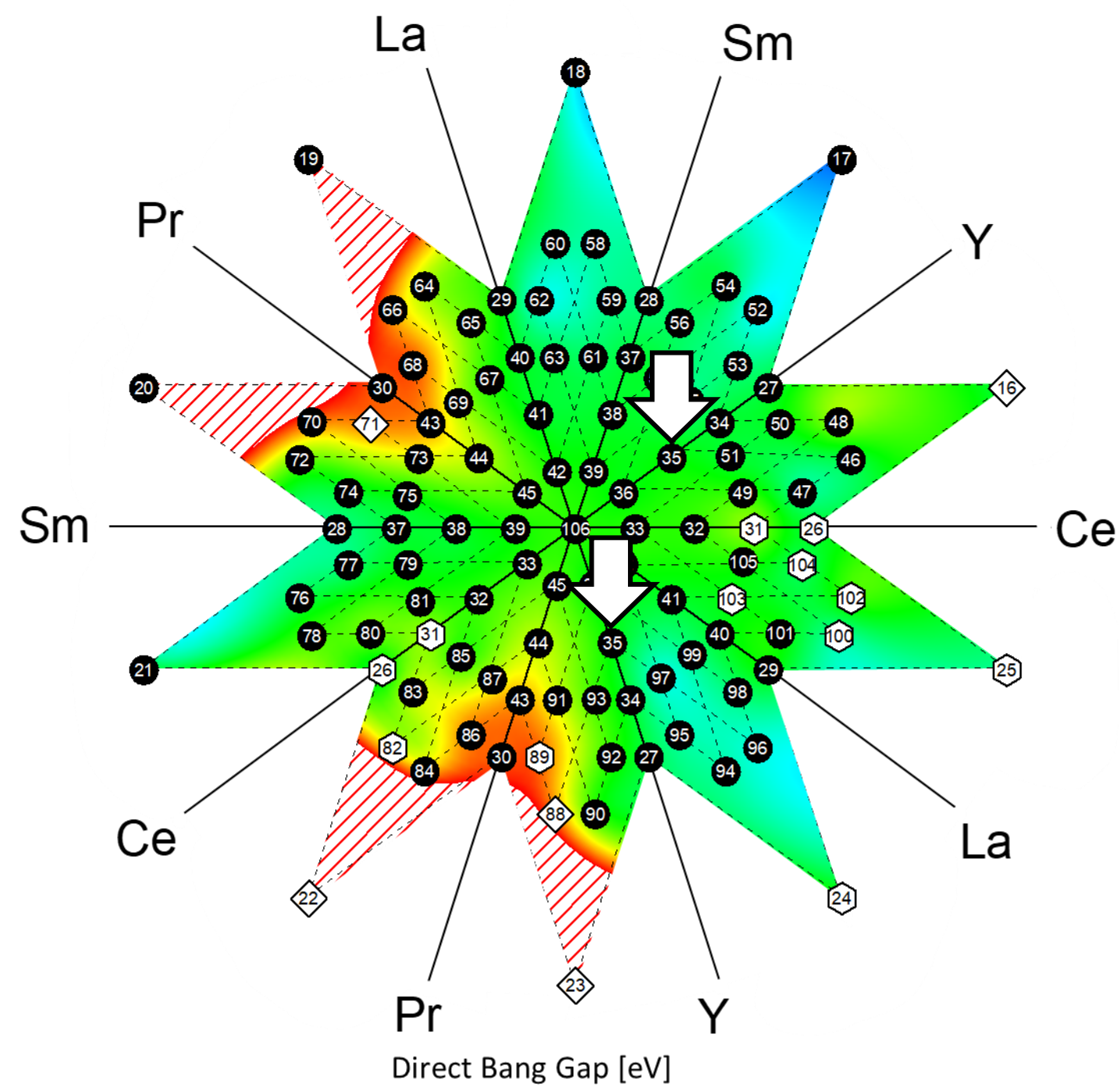
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



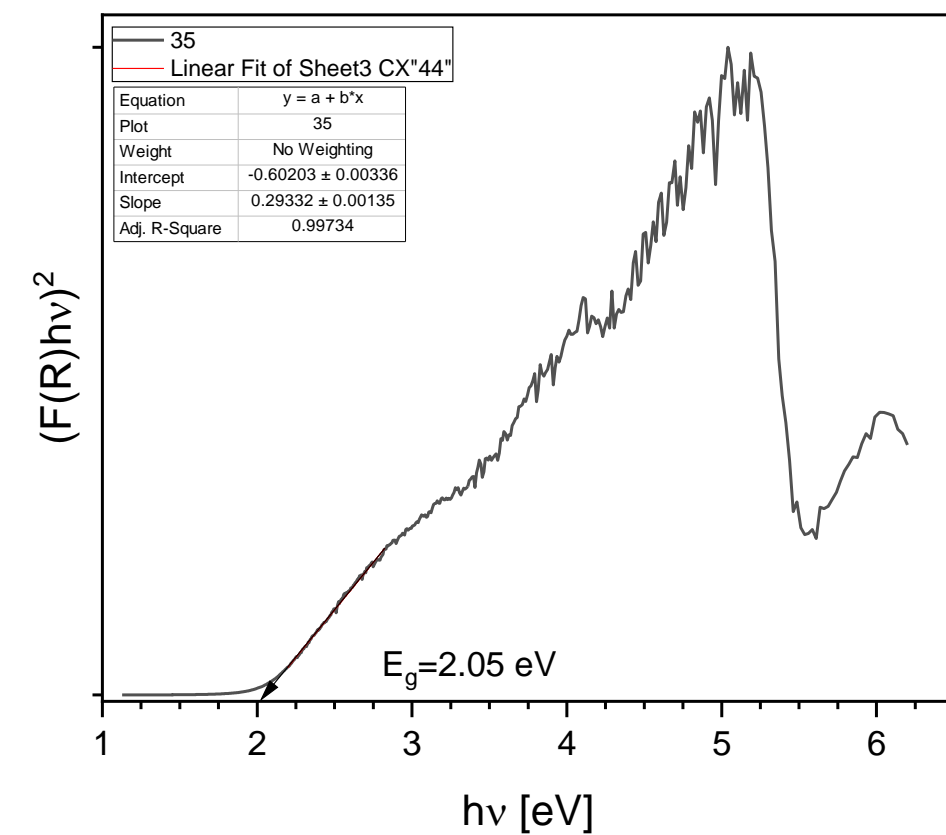
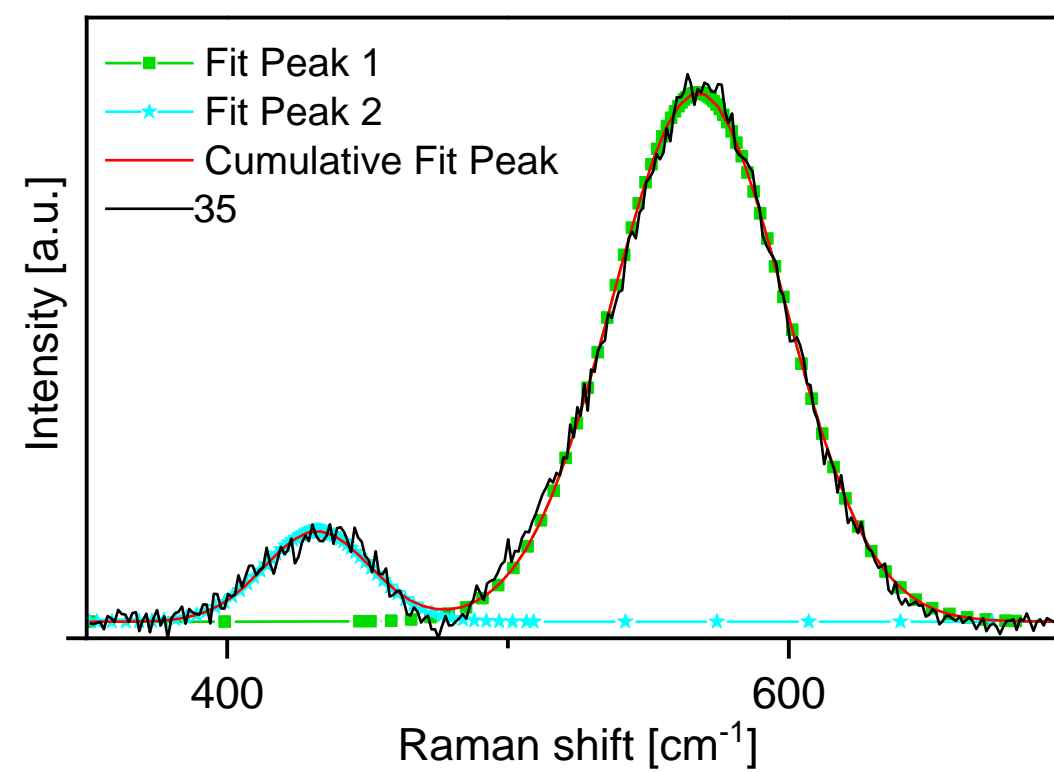
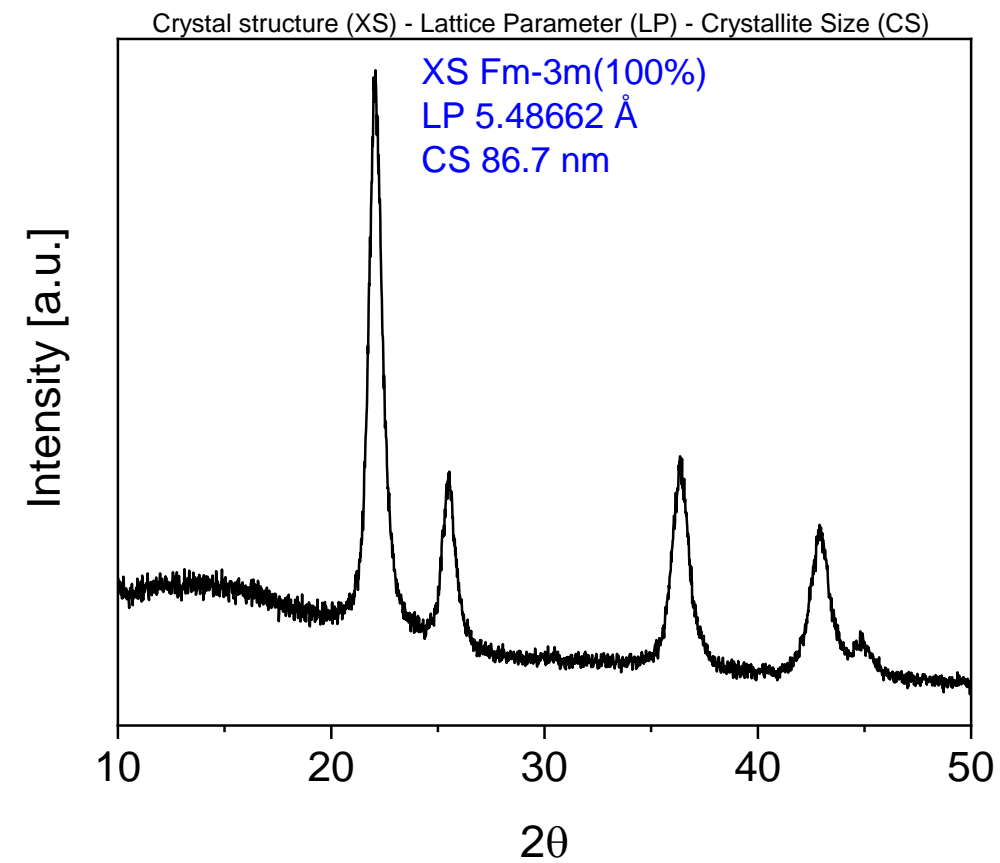
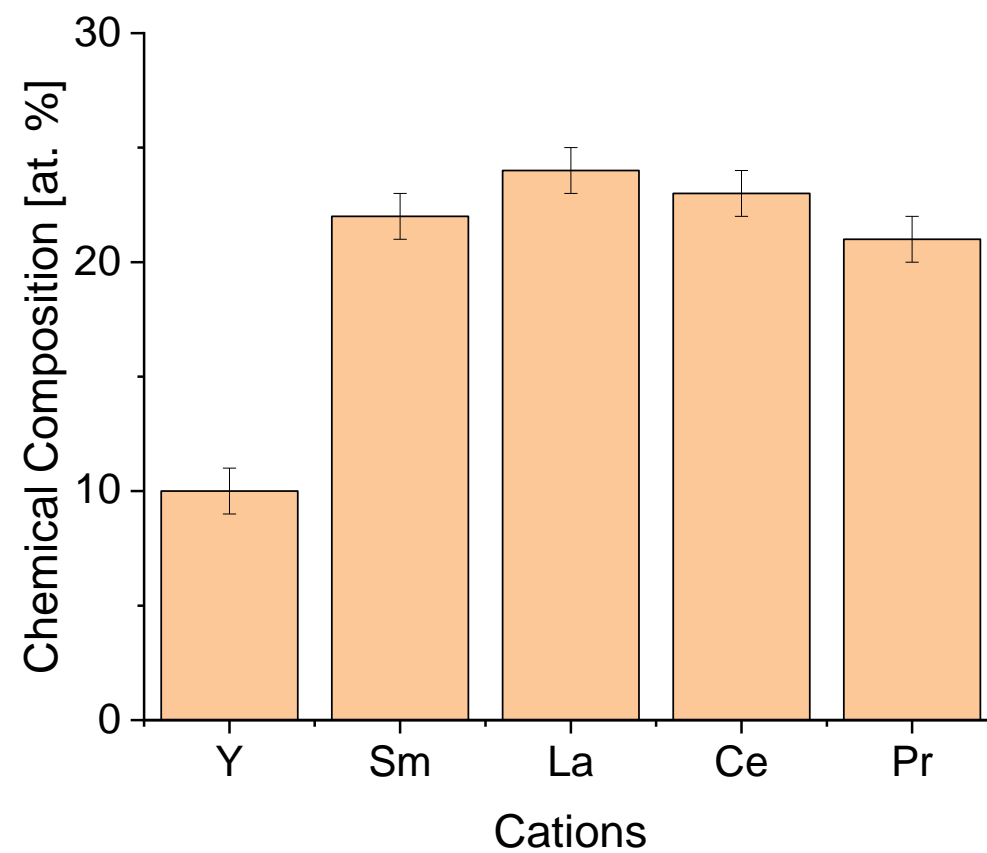
# Sample 34



# Sample 35

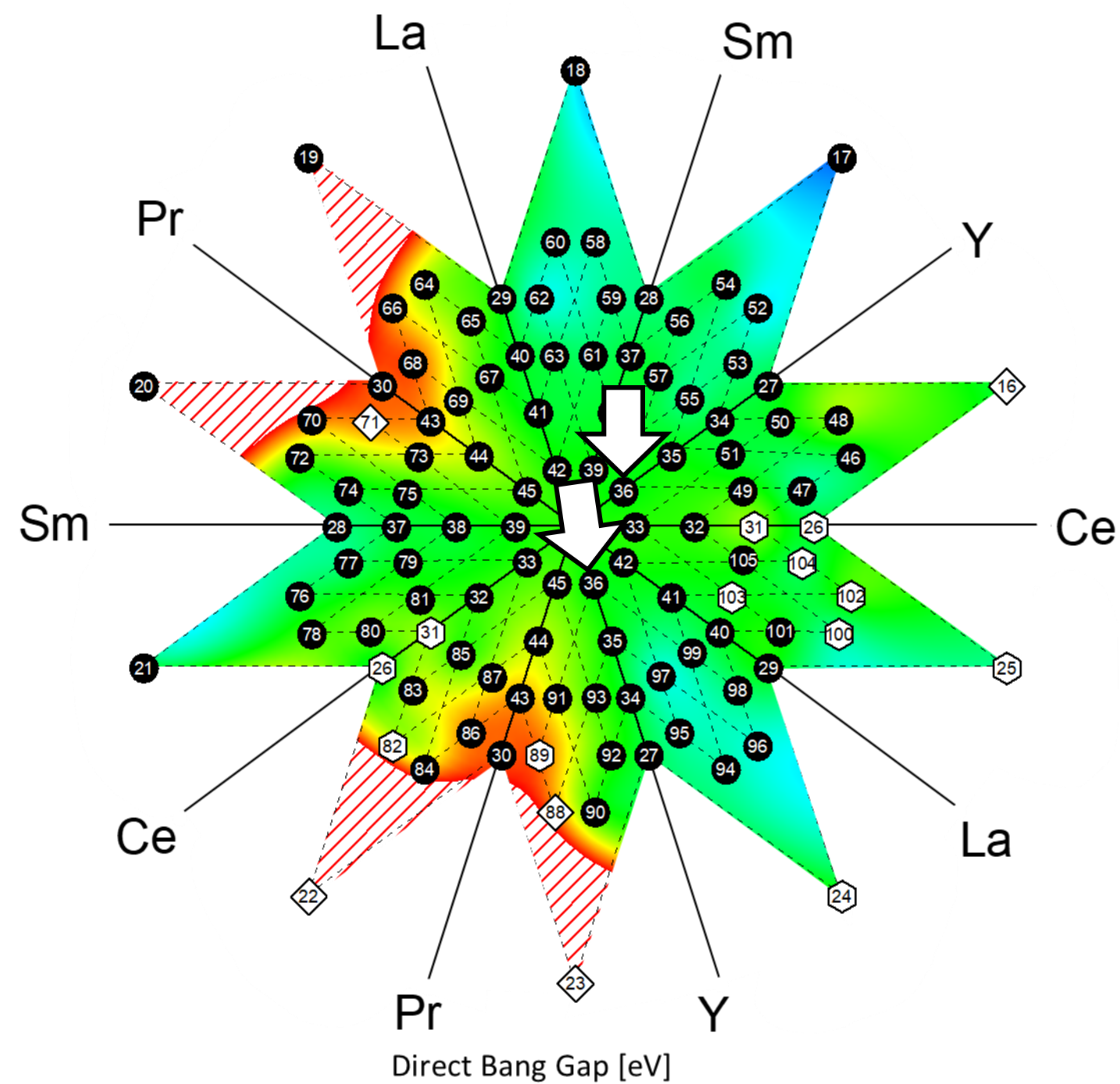


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

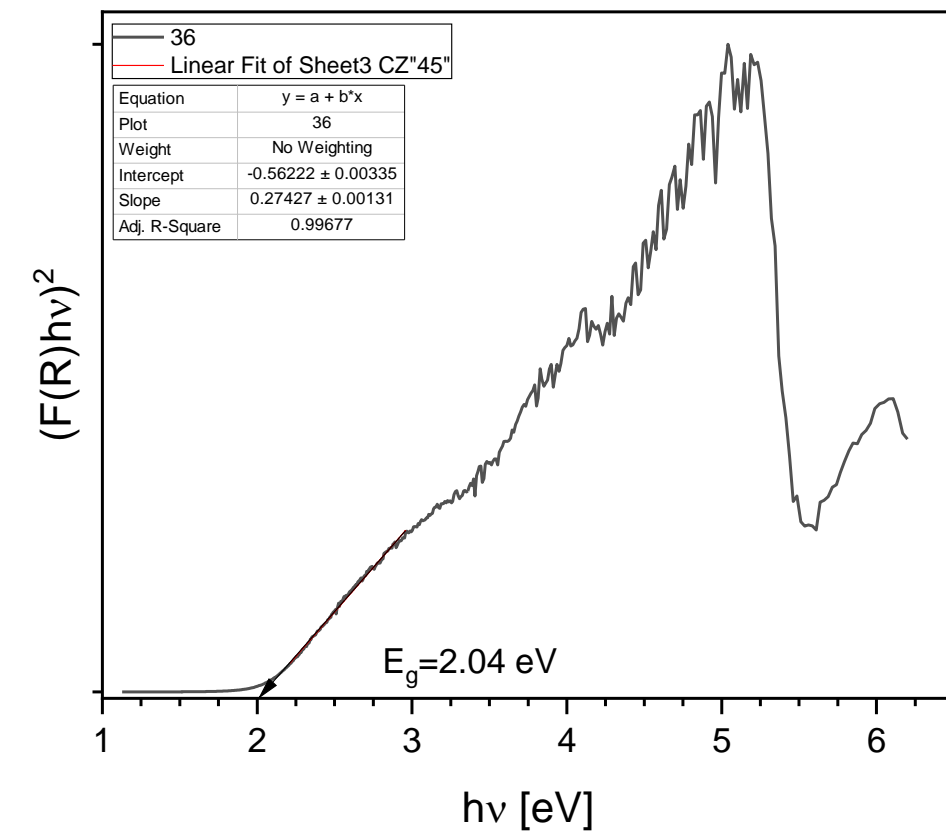
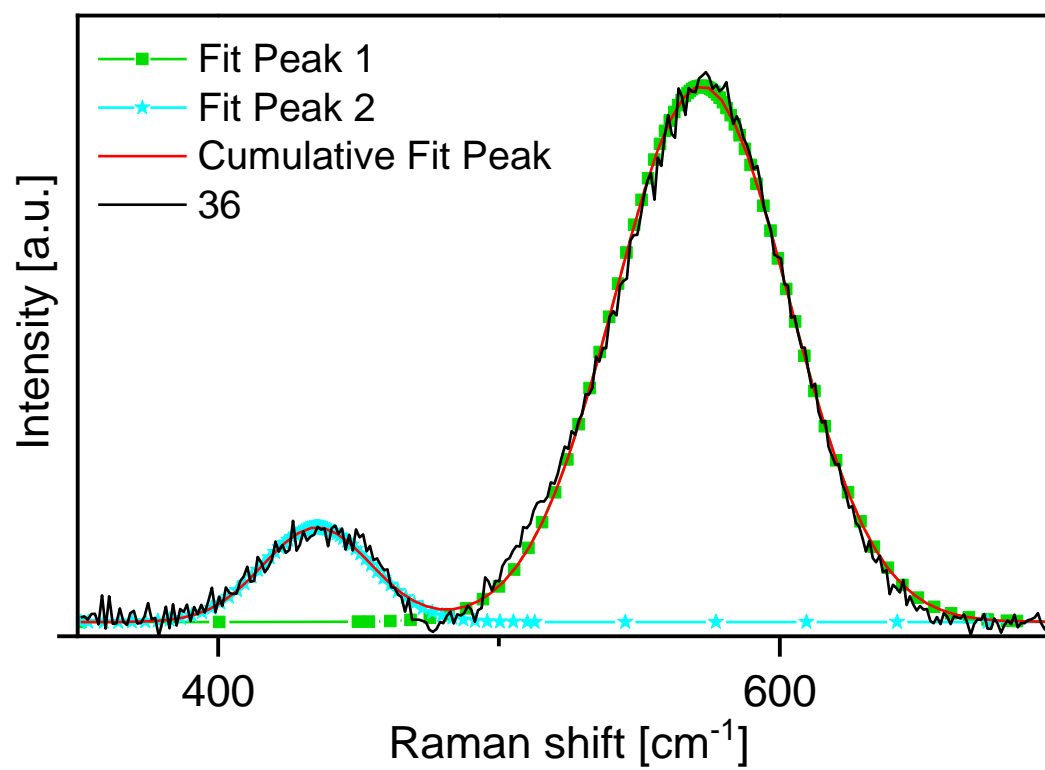
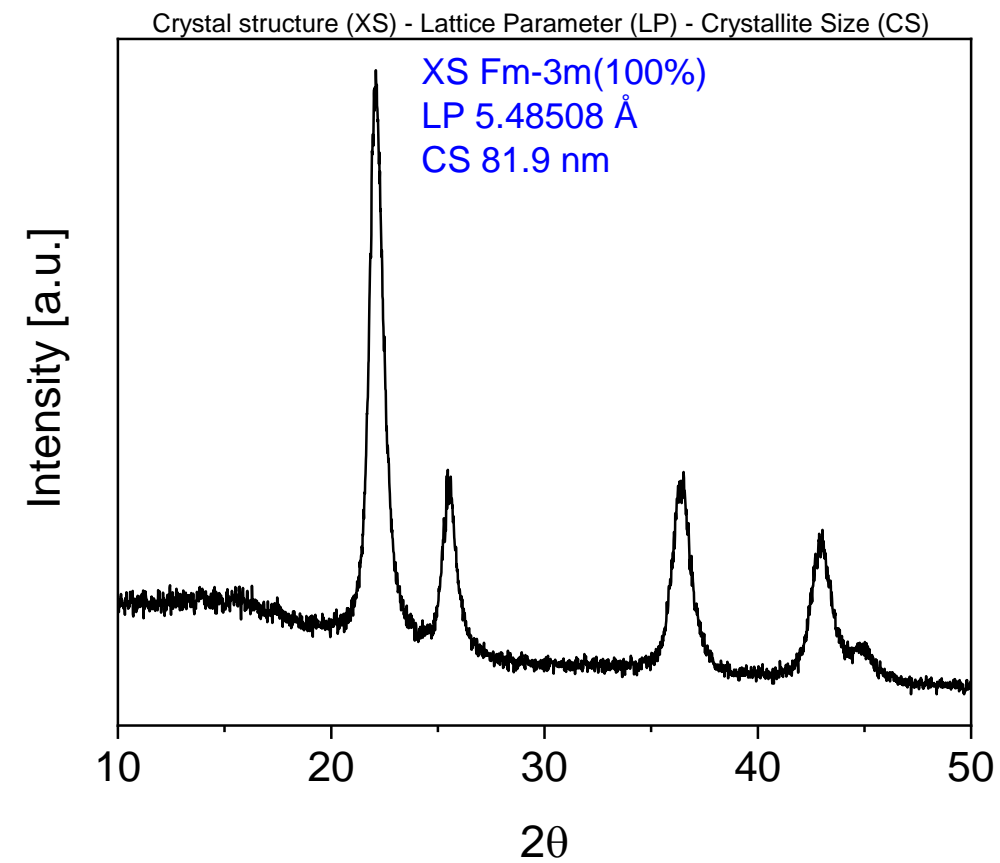
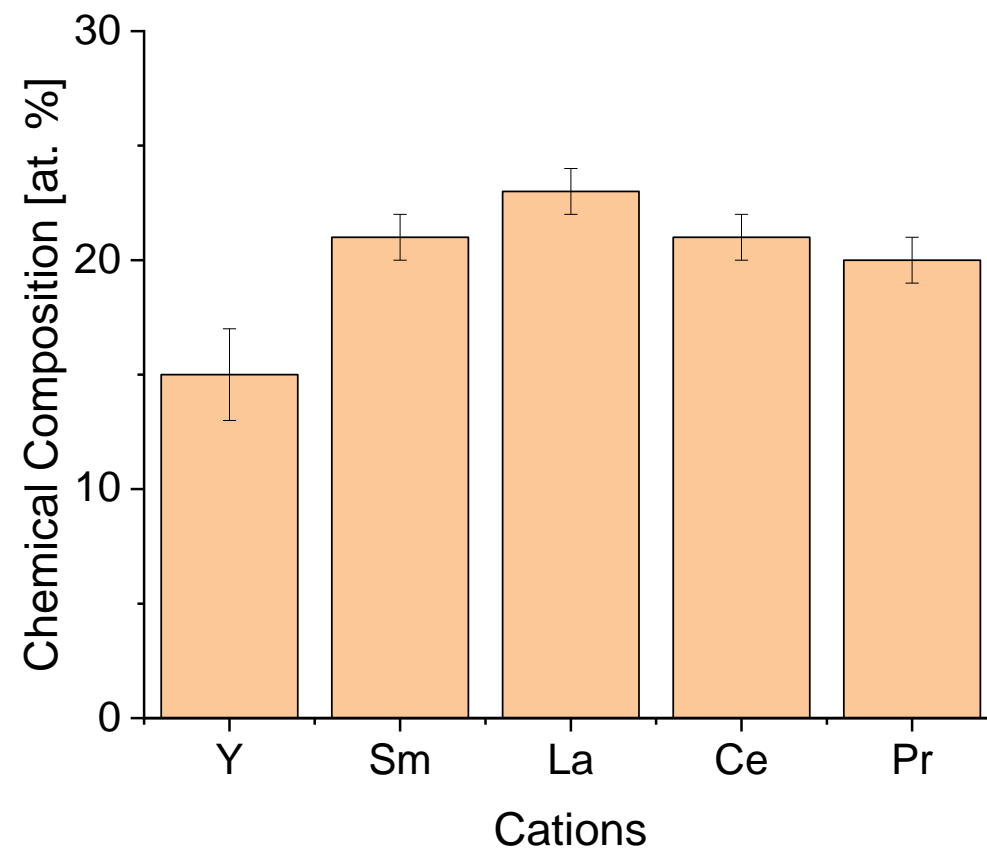




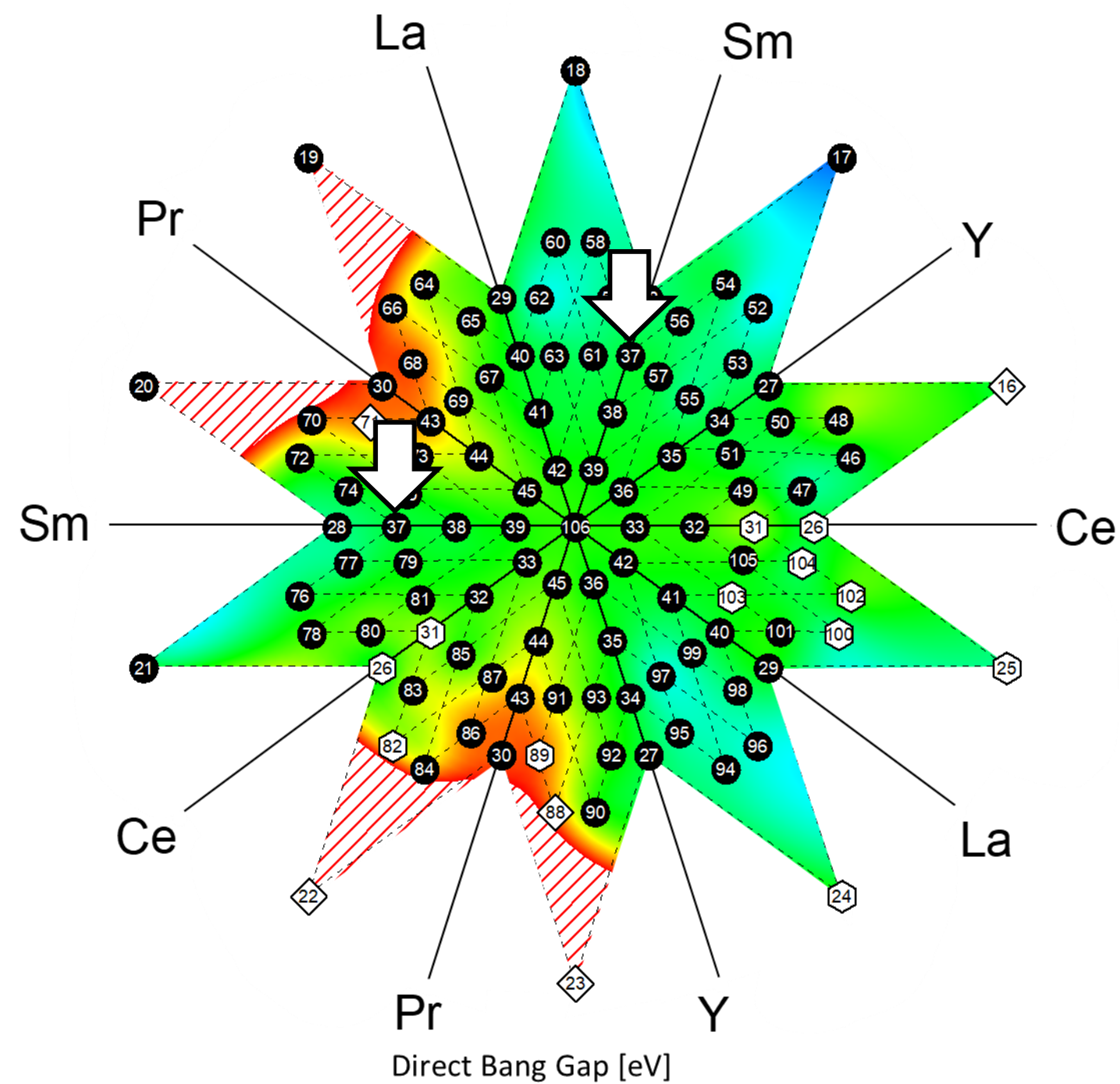
# Sample 36



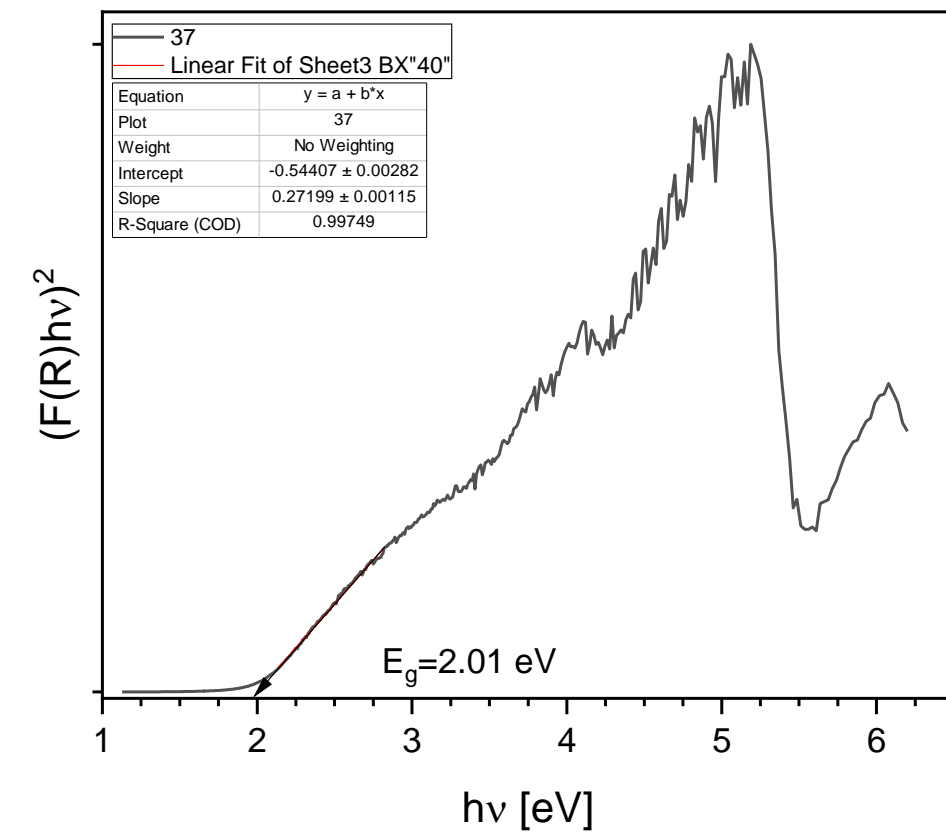
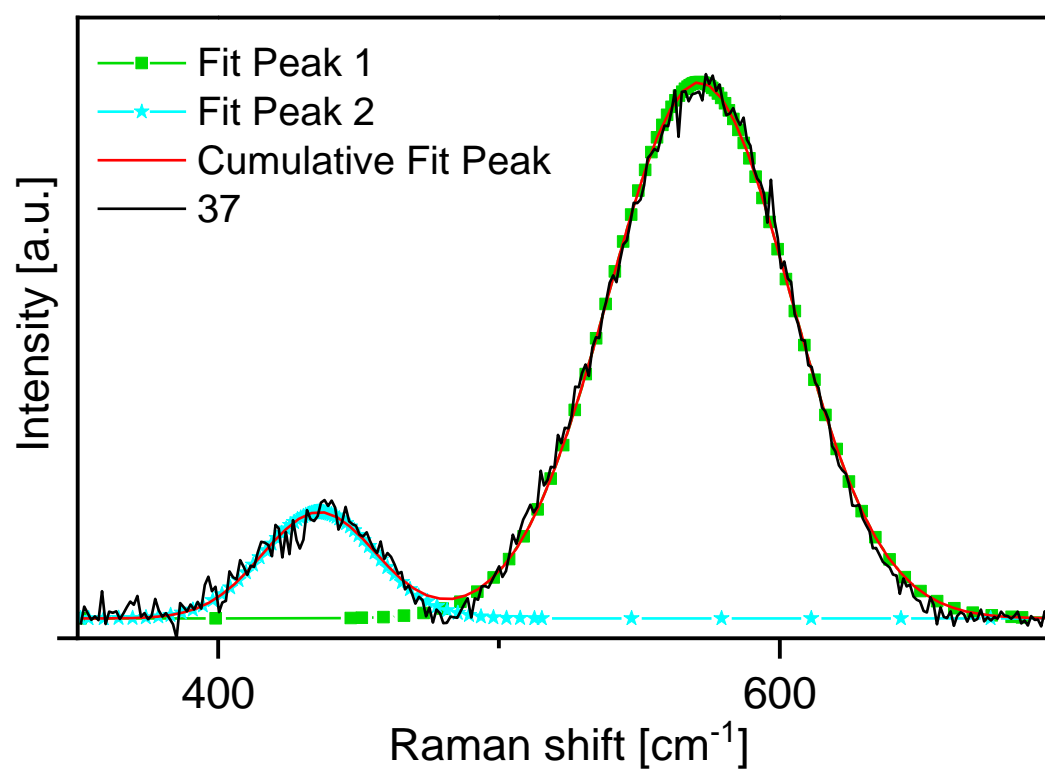
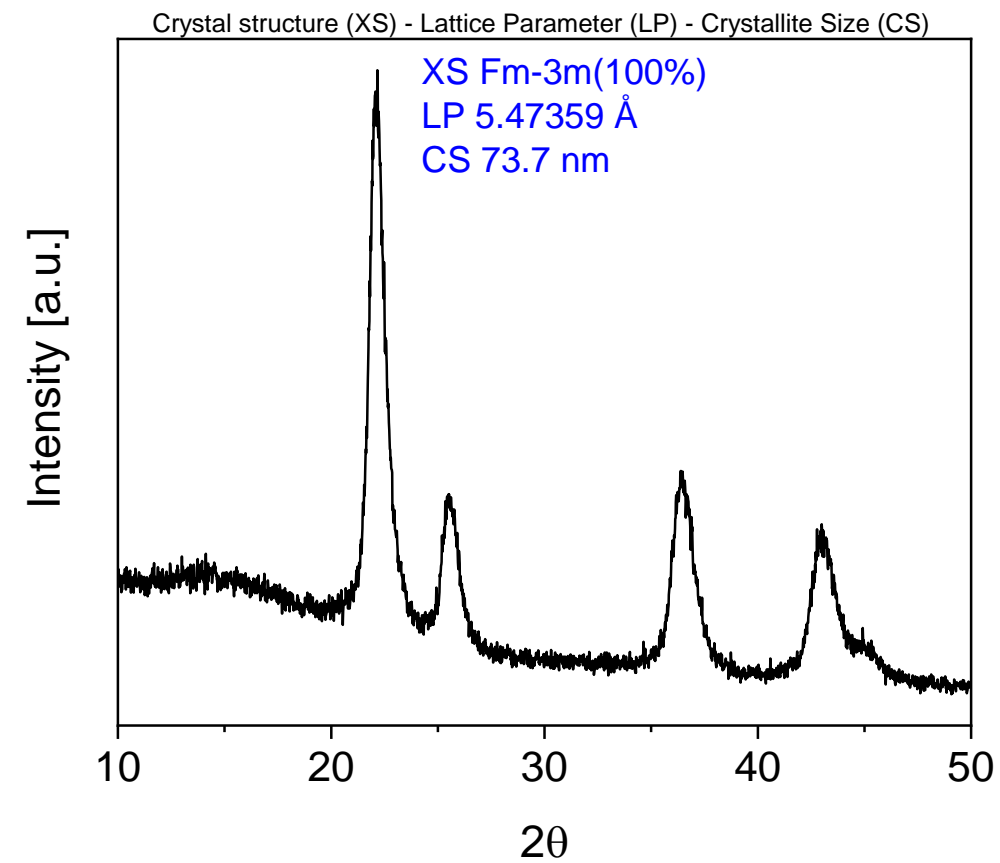
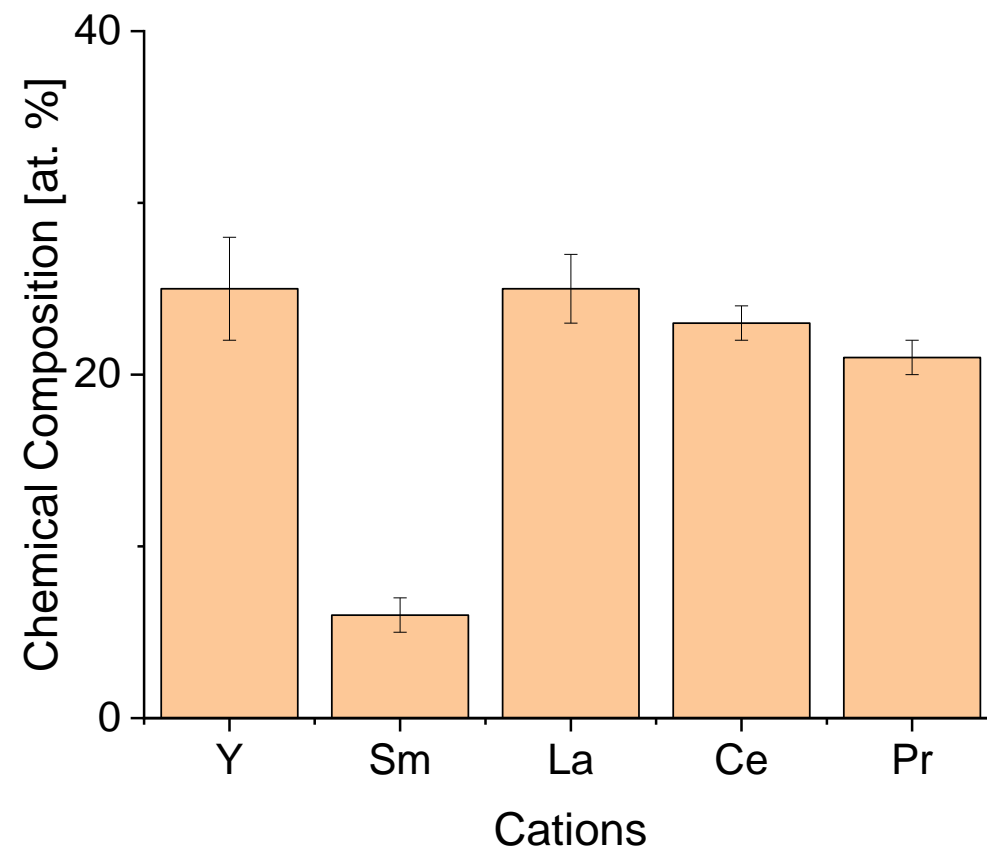
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



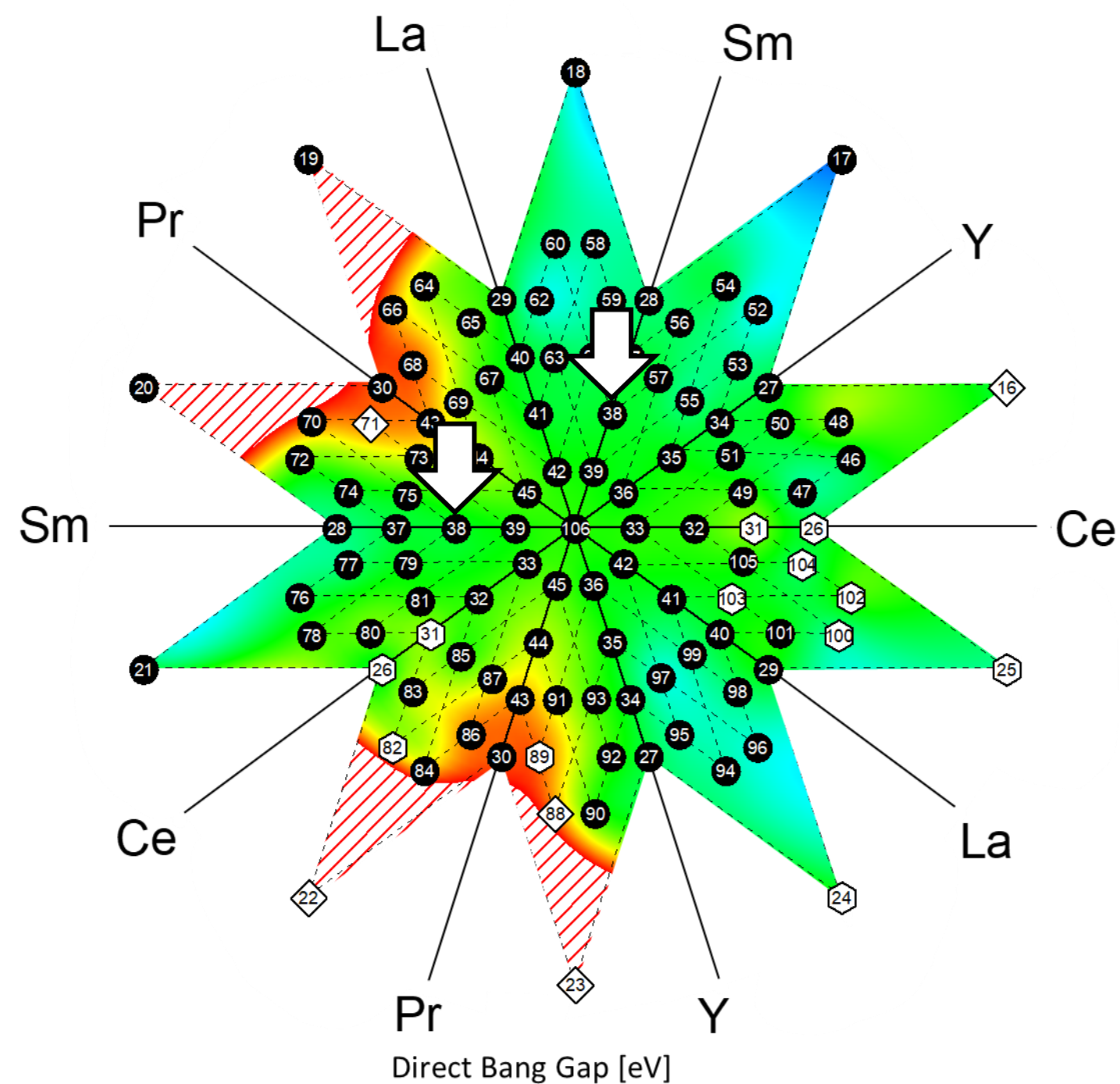
# Sample 37



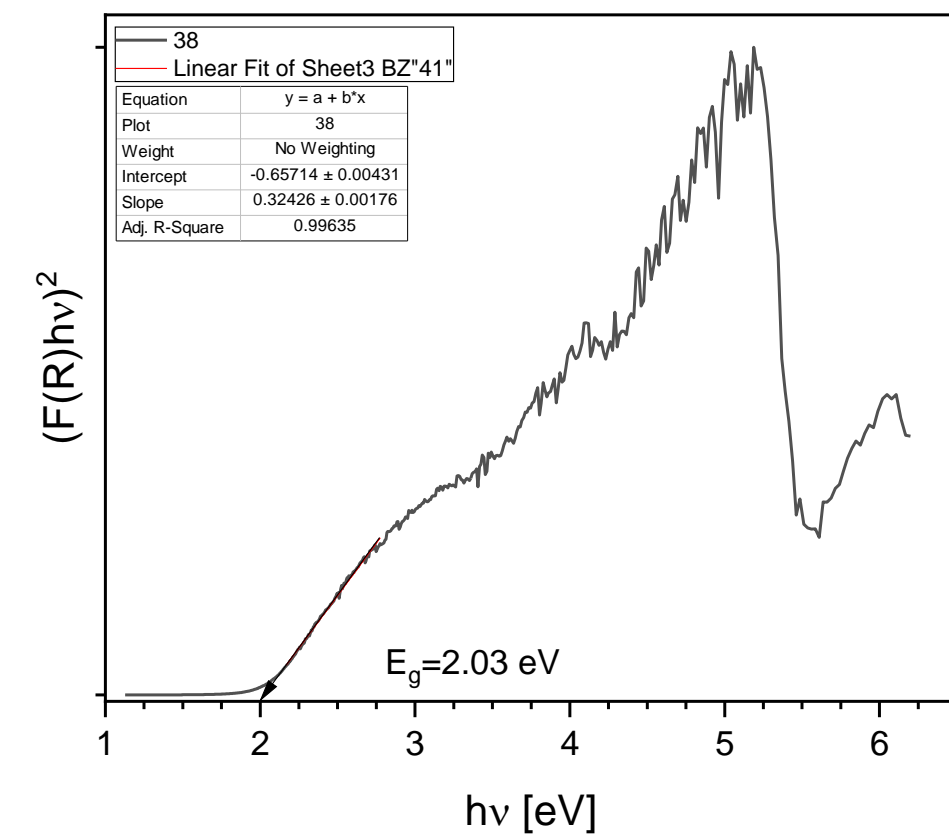
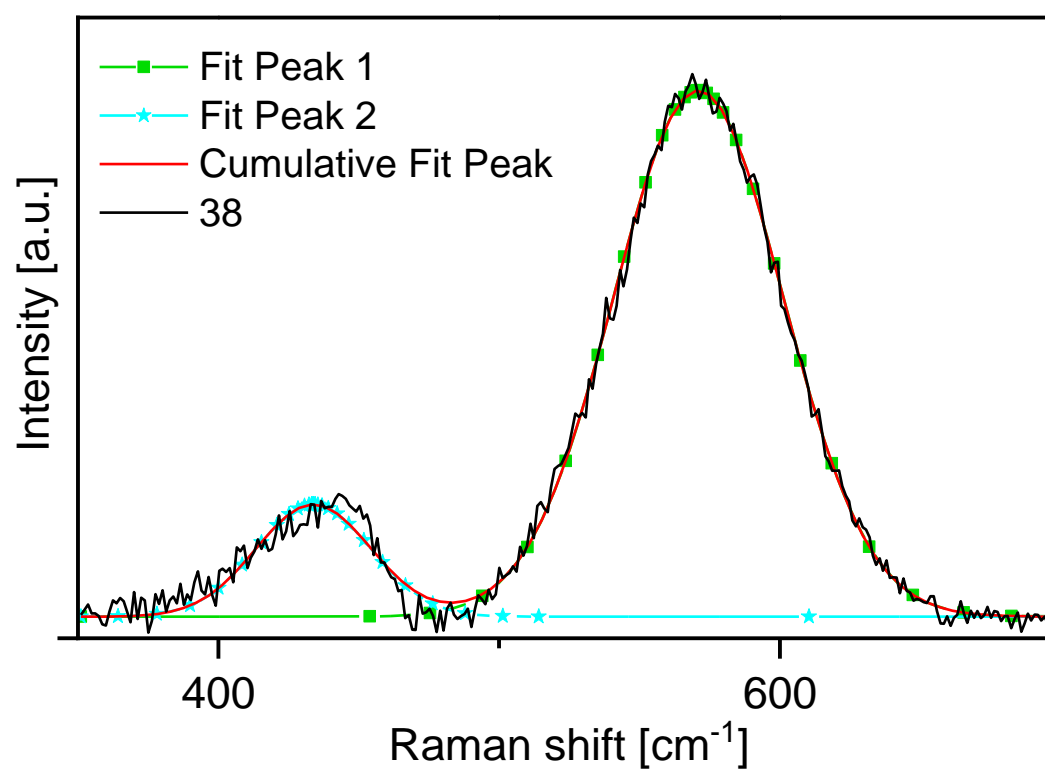
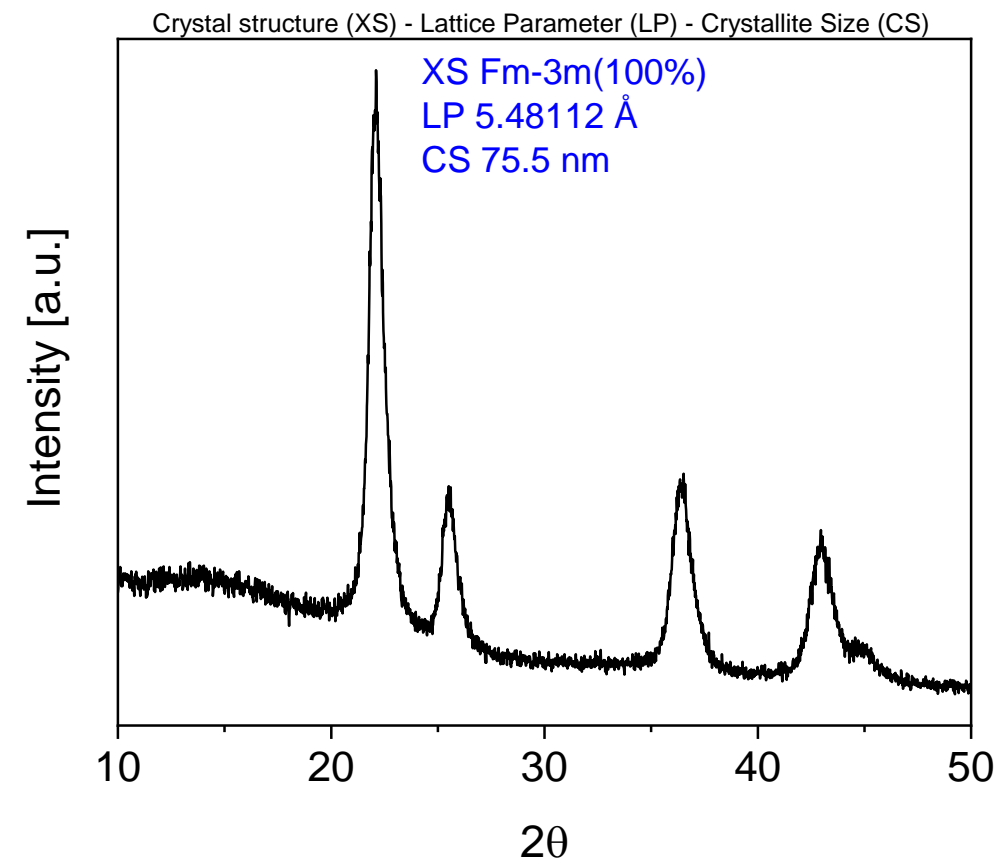
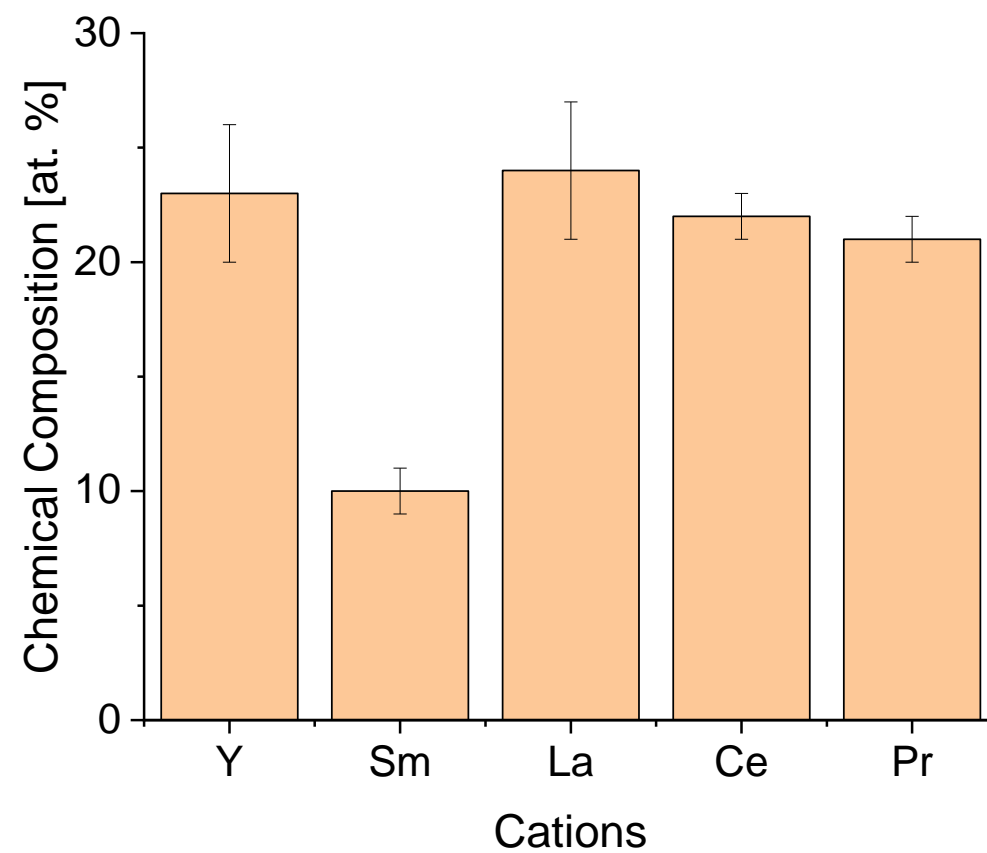
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



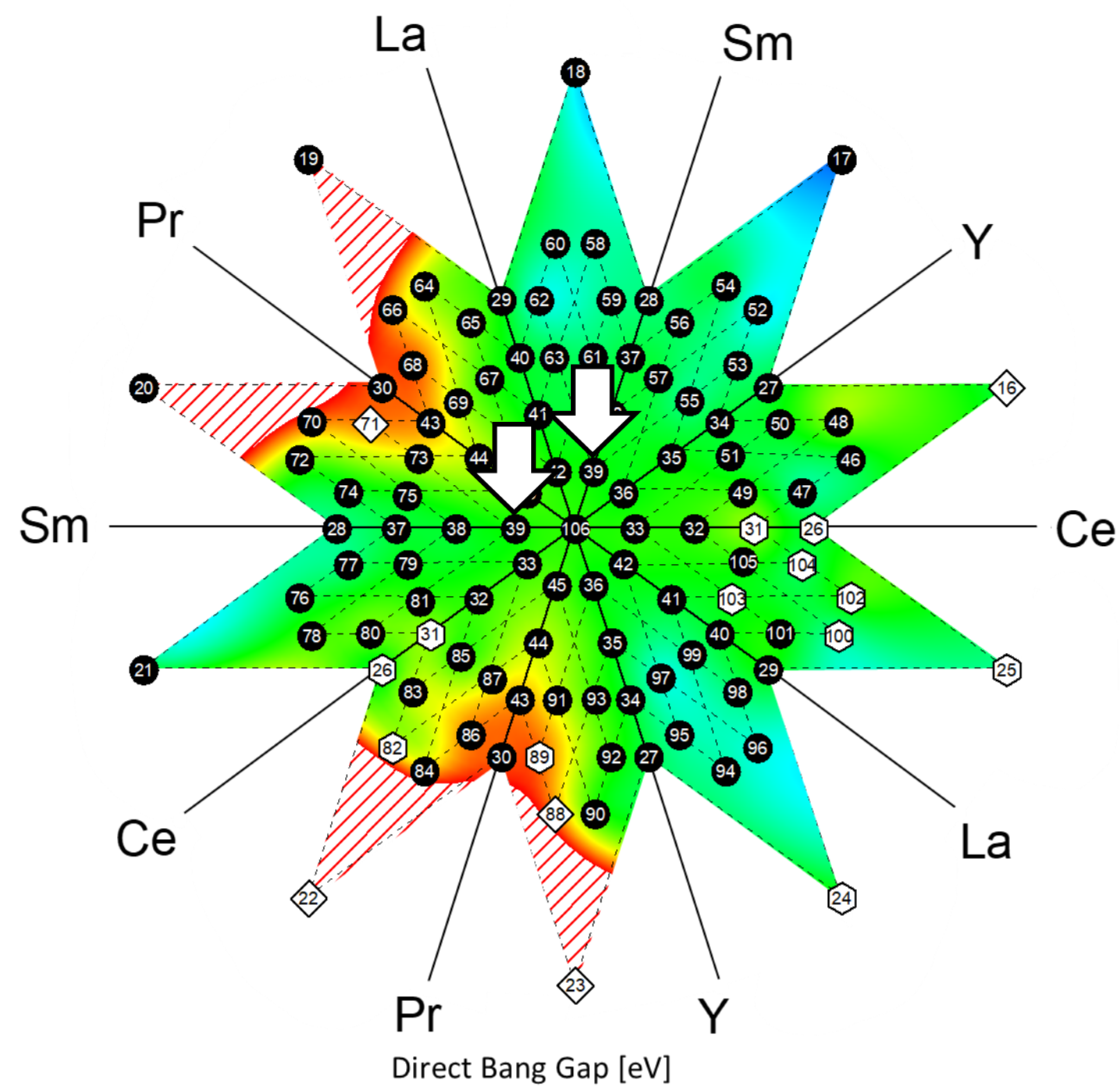
# Sample 38



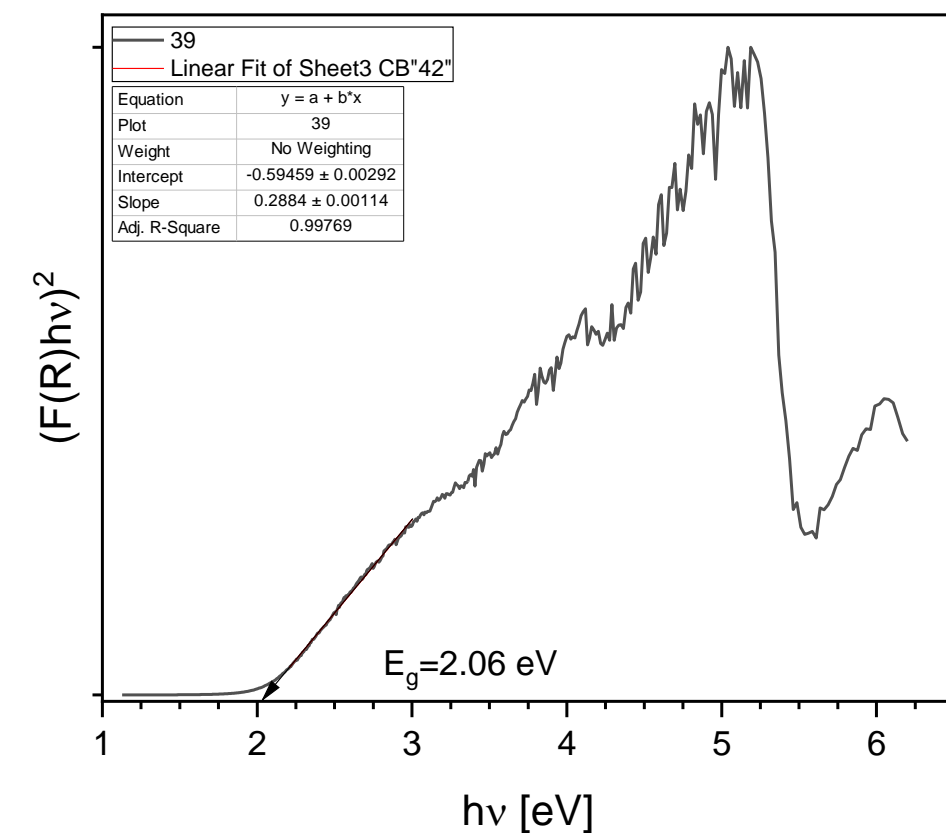
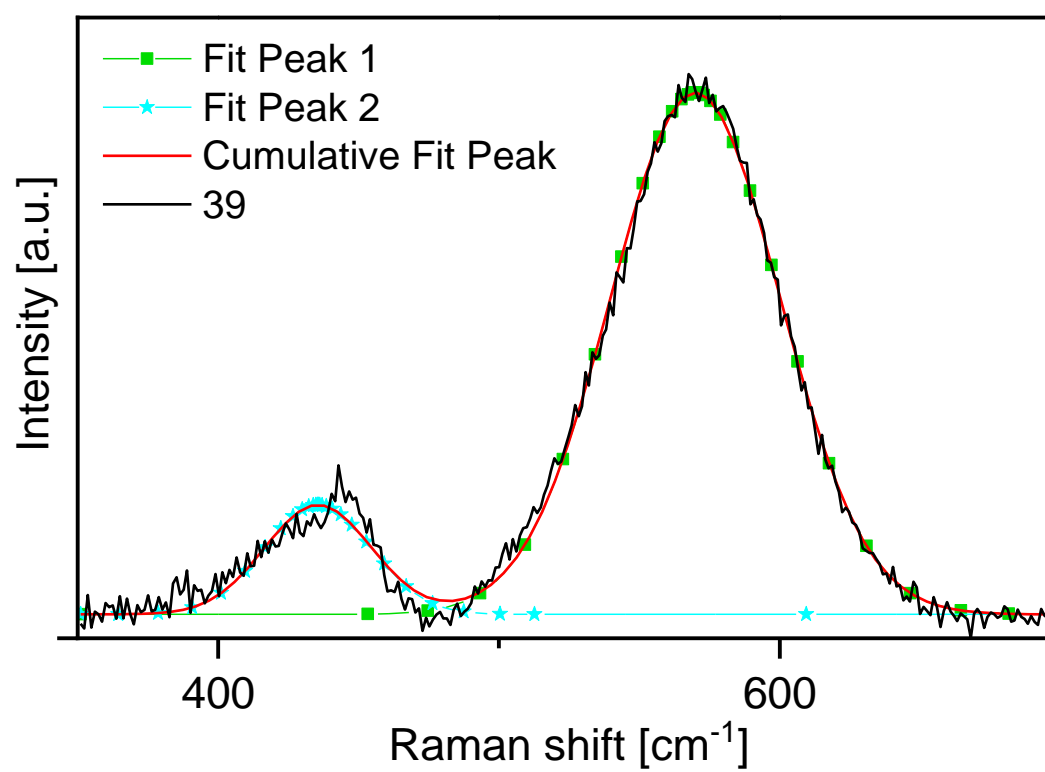
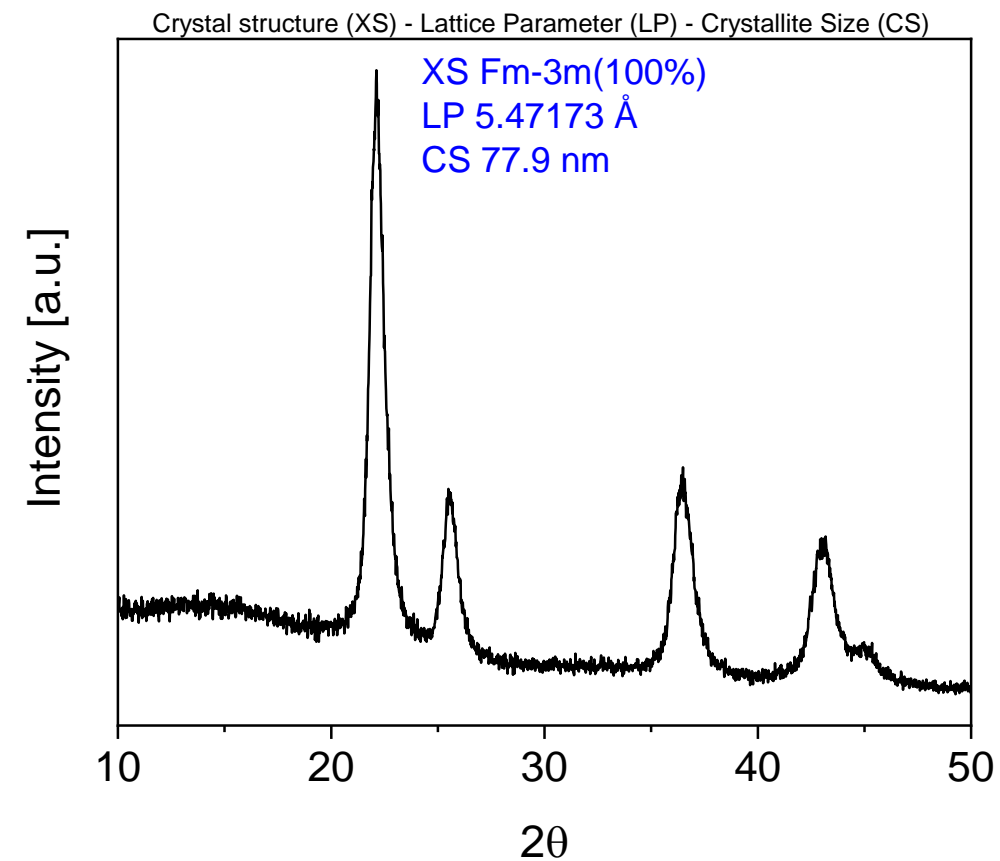
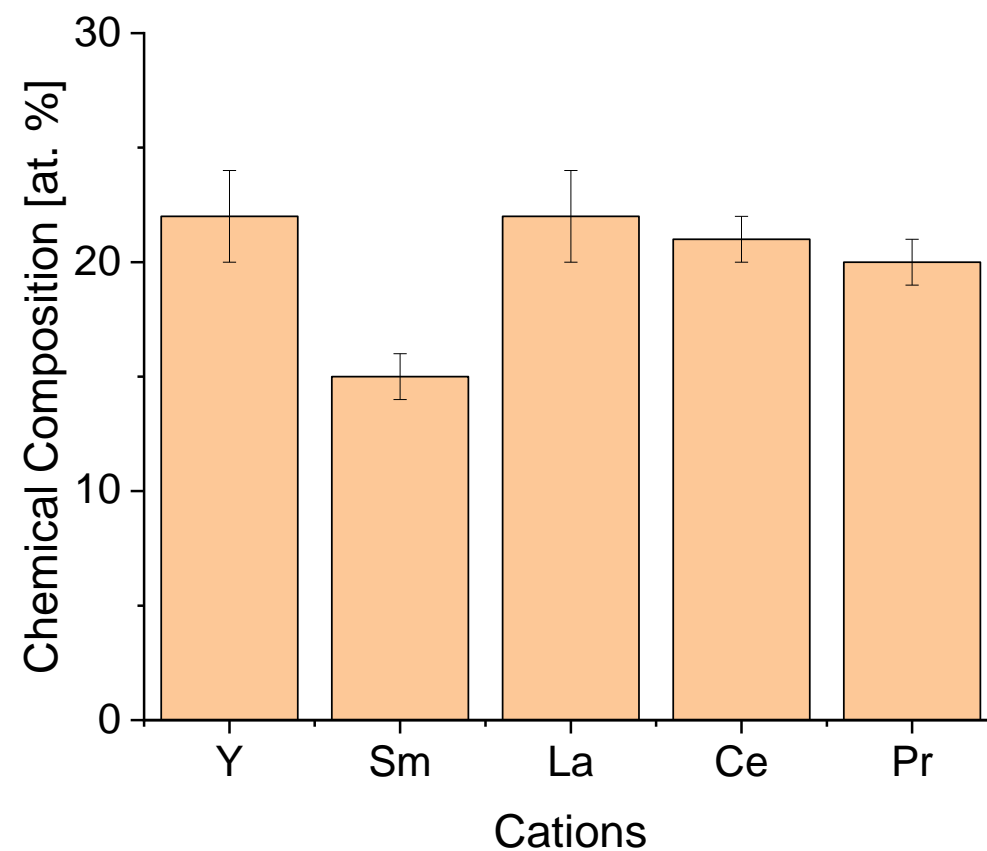
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



# Sample 39

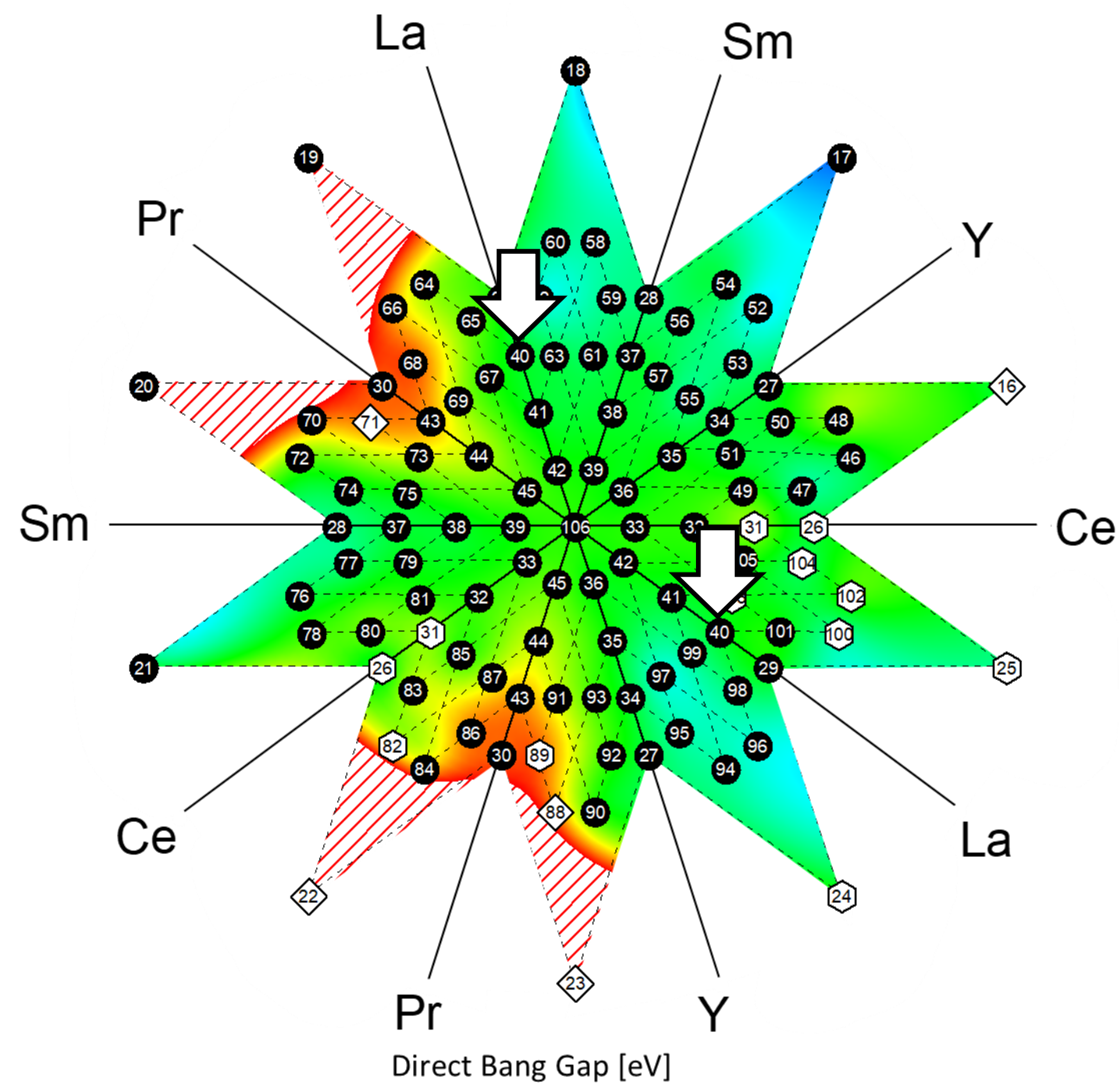


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

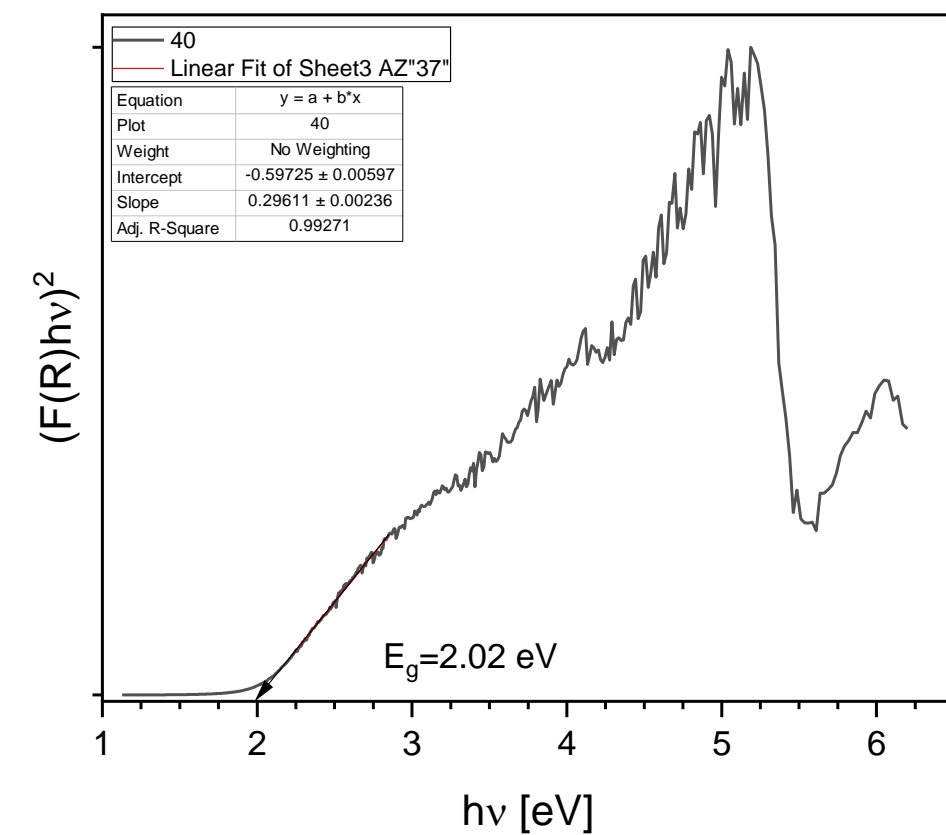
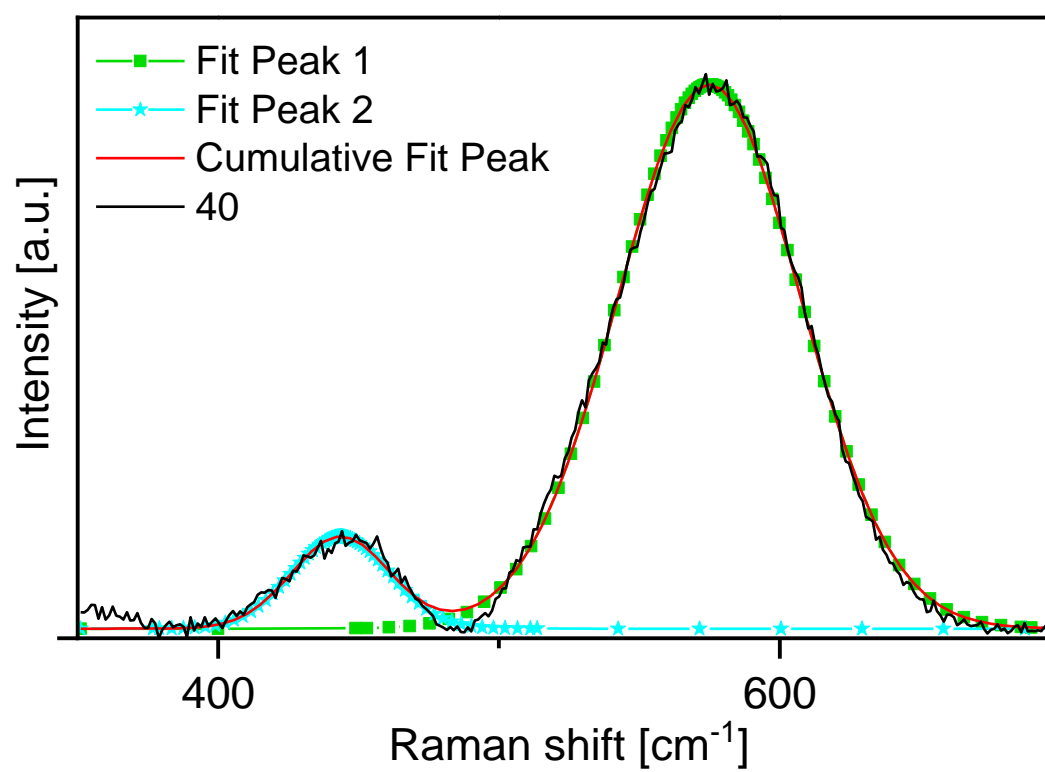
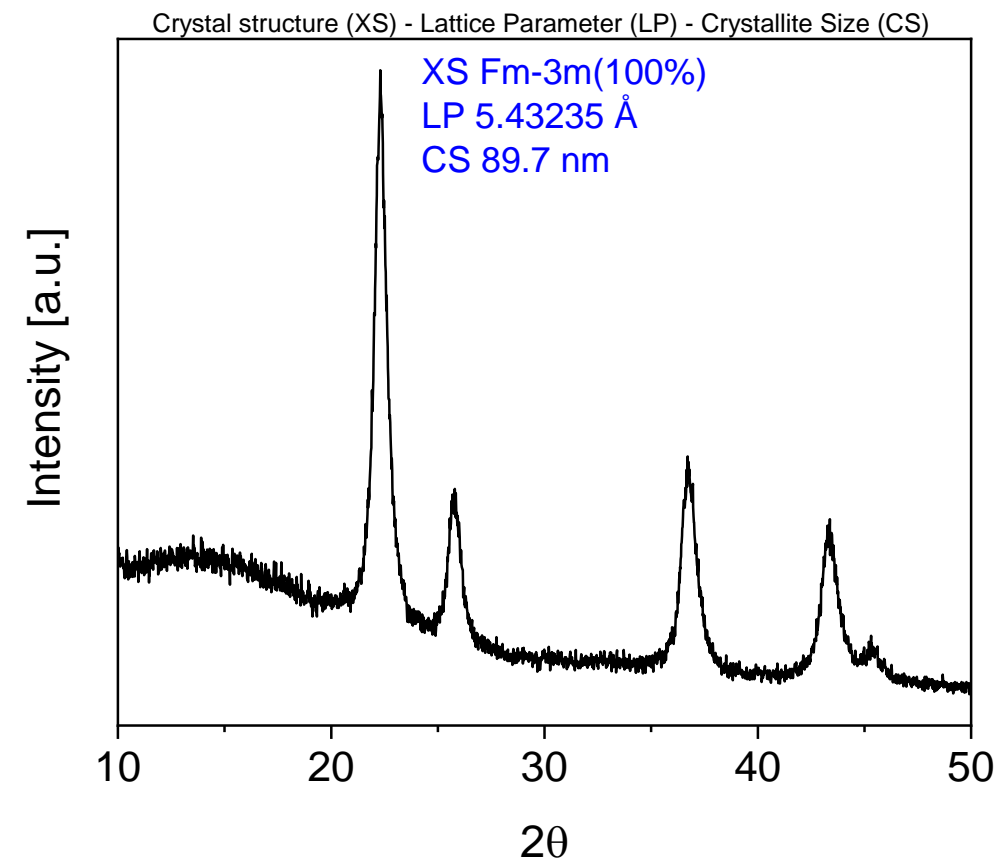
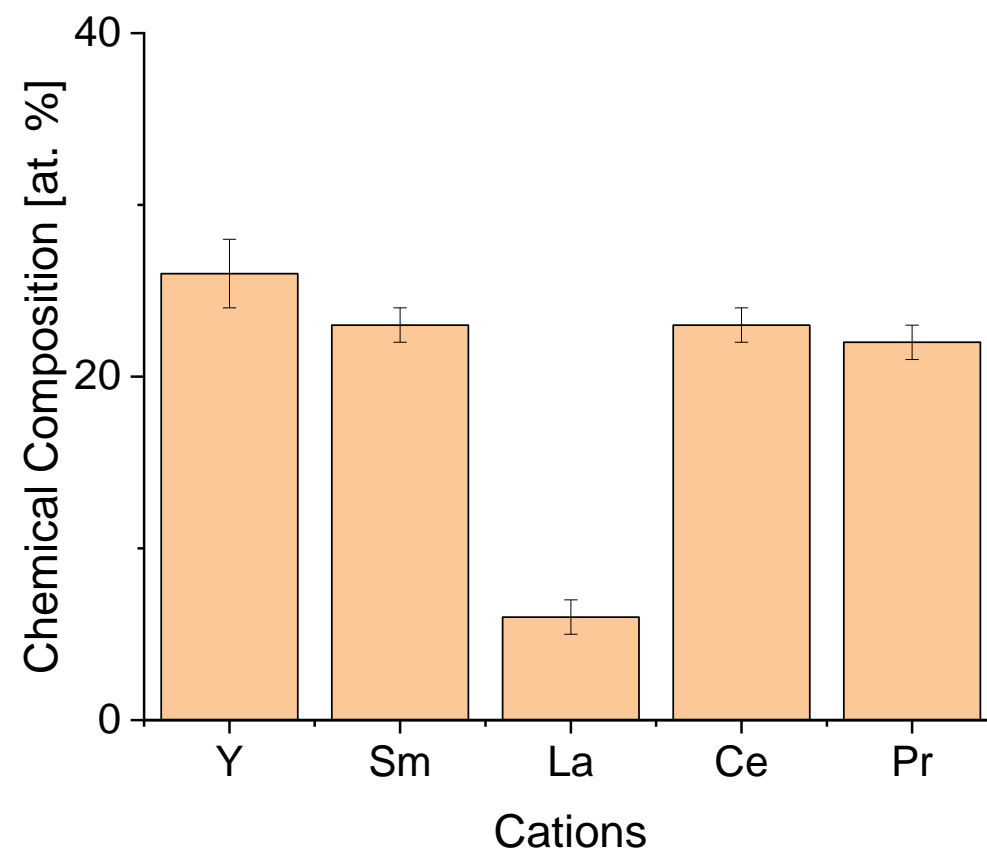




# Sample 40

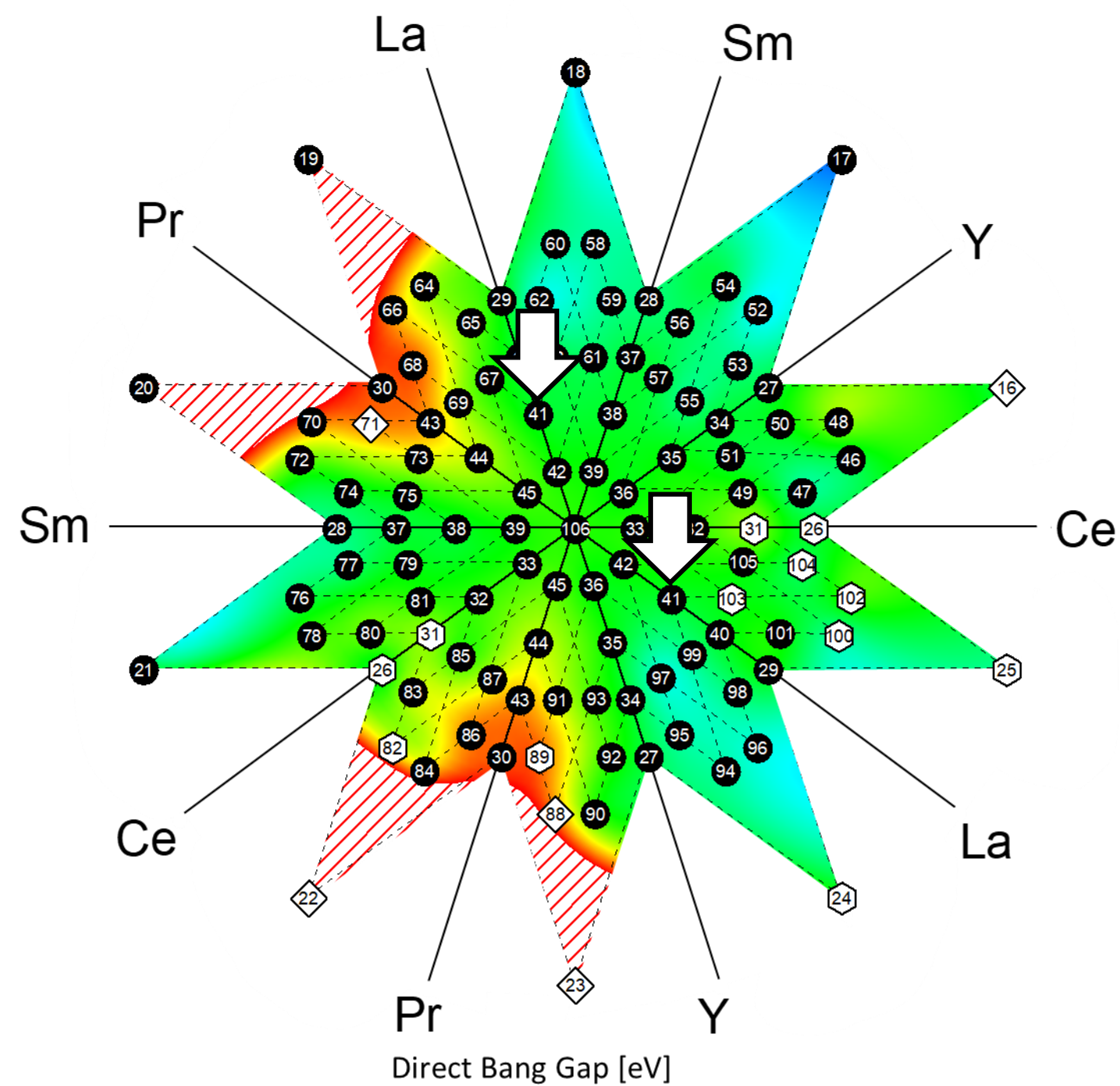


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

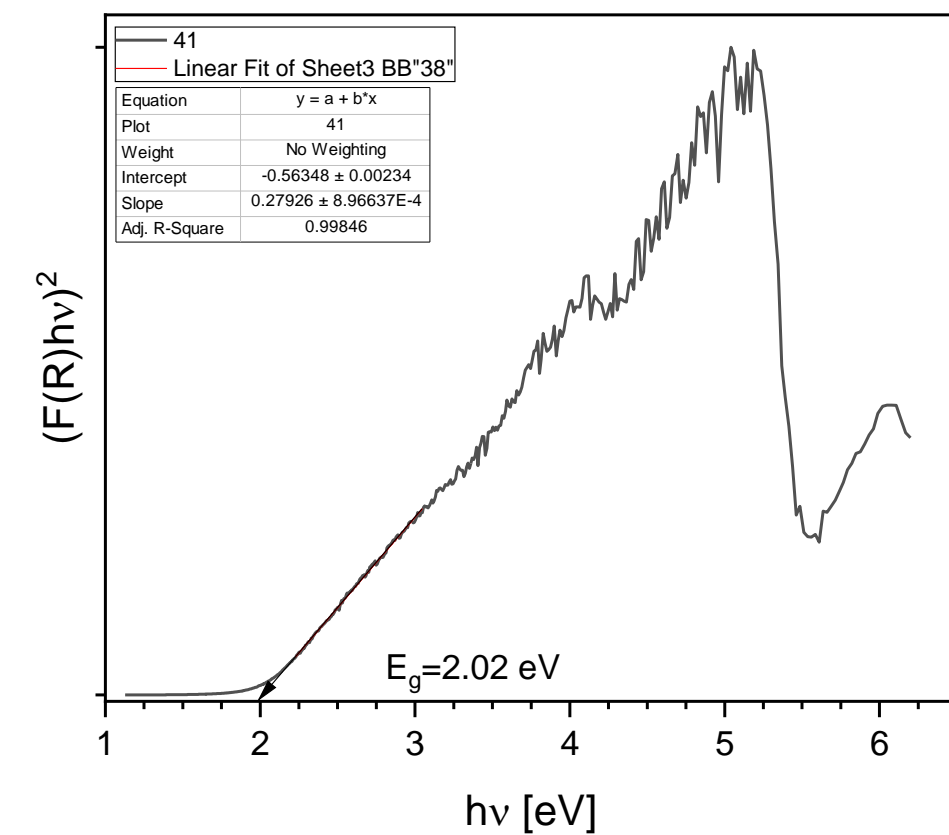
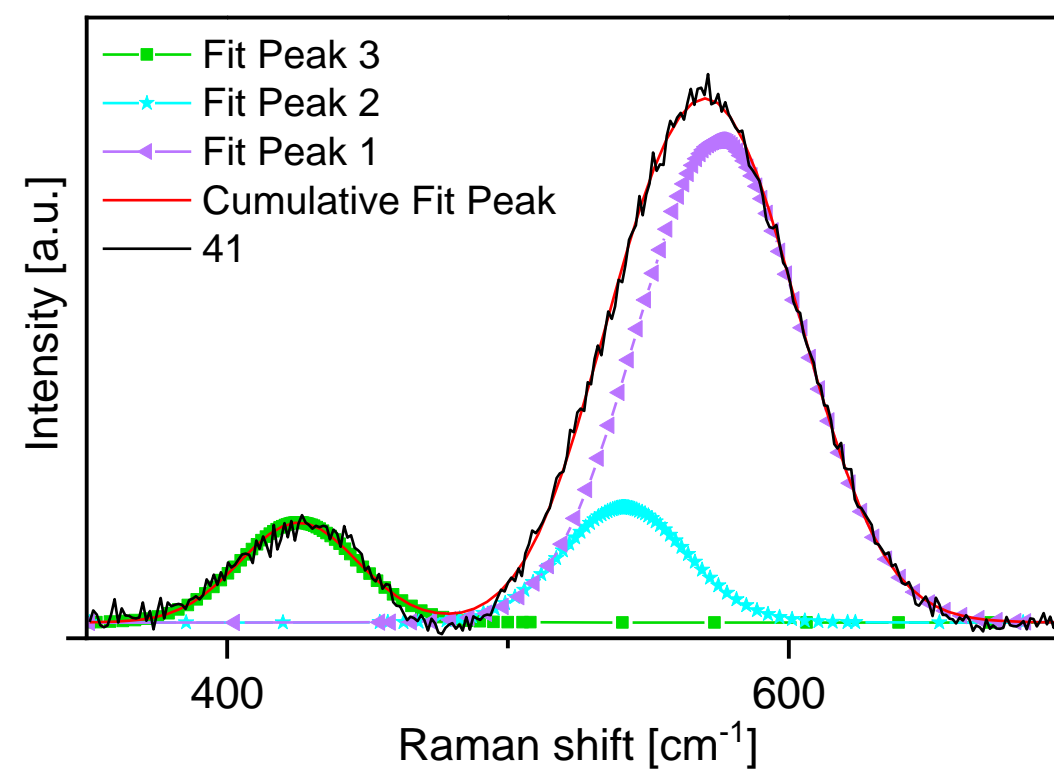
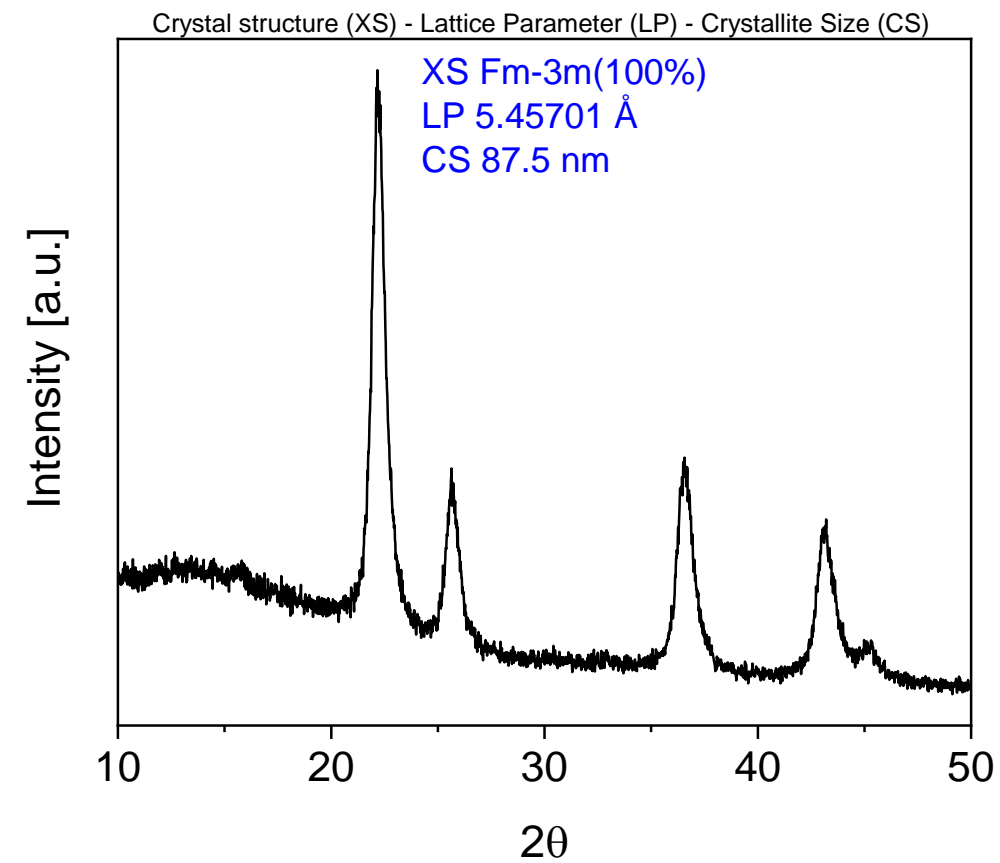
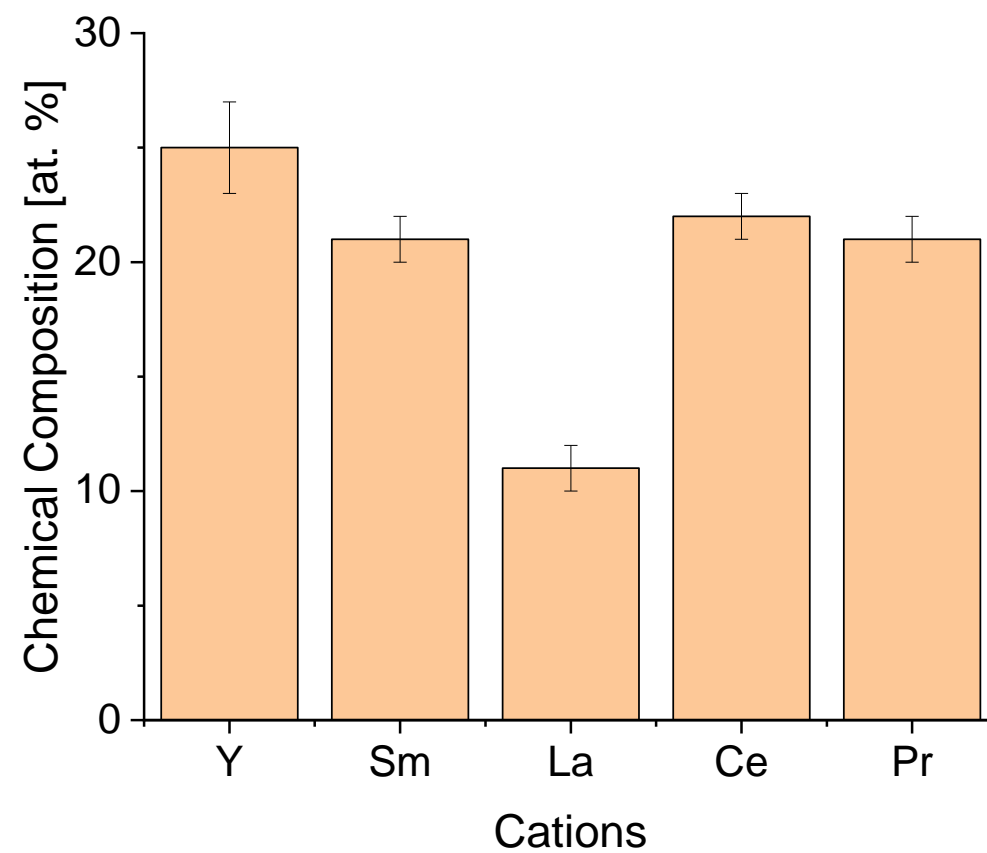




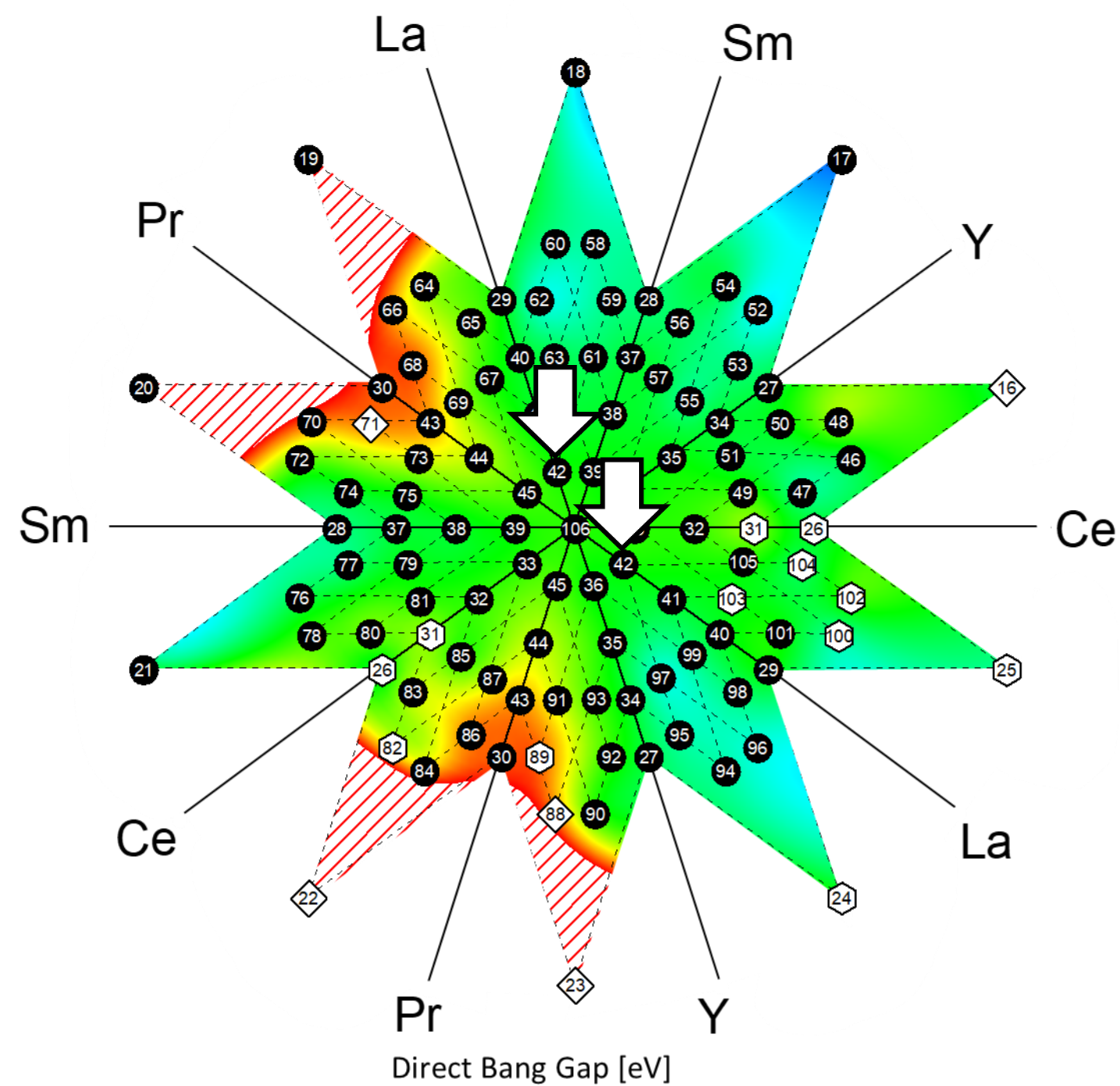
# Sample 41



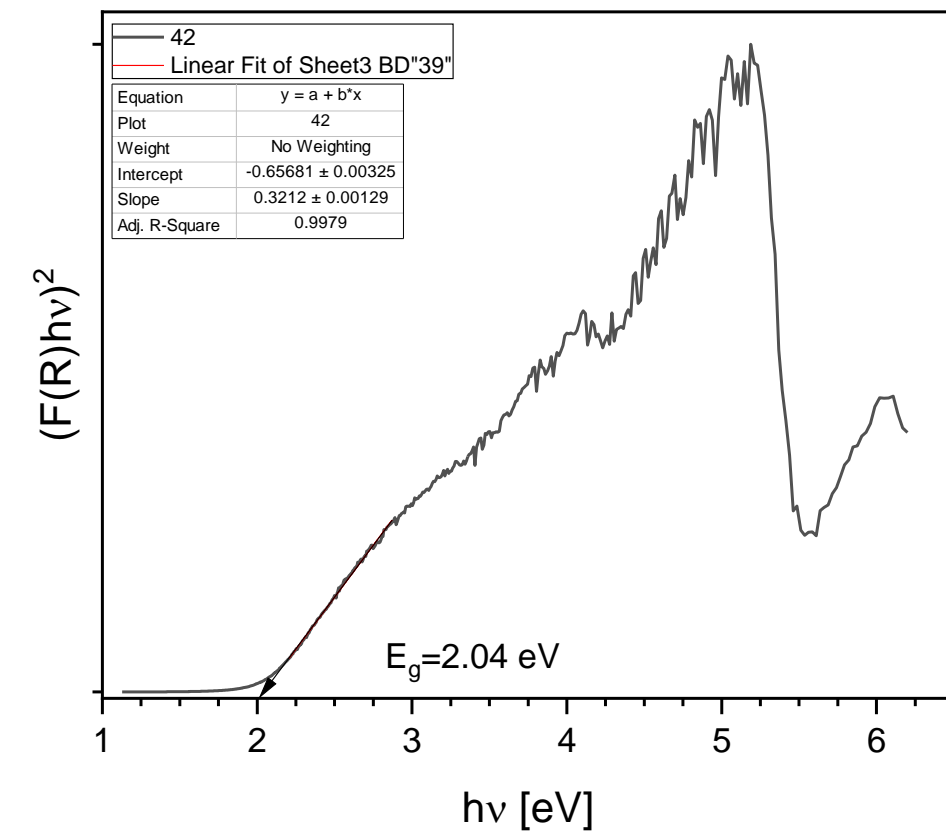
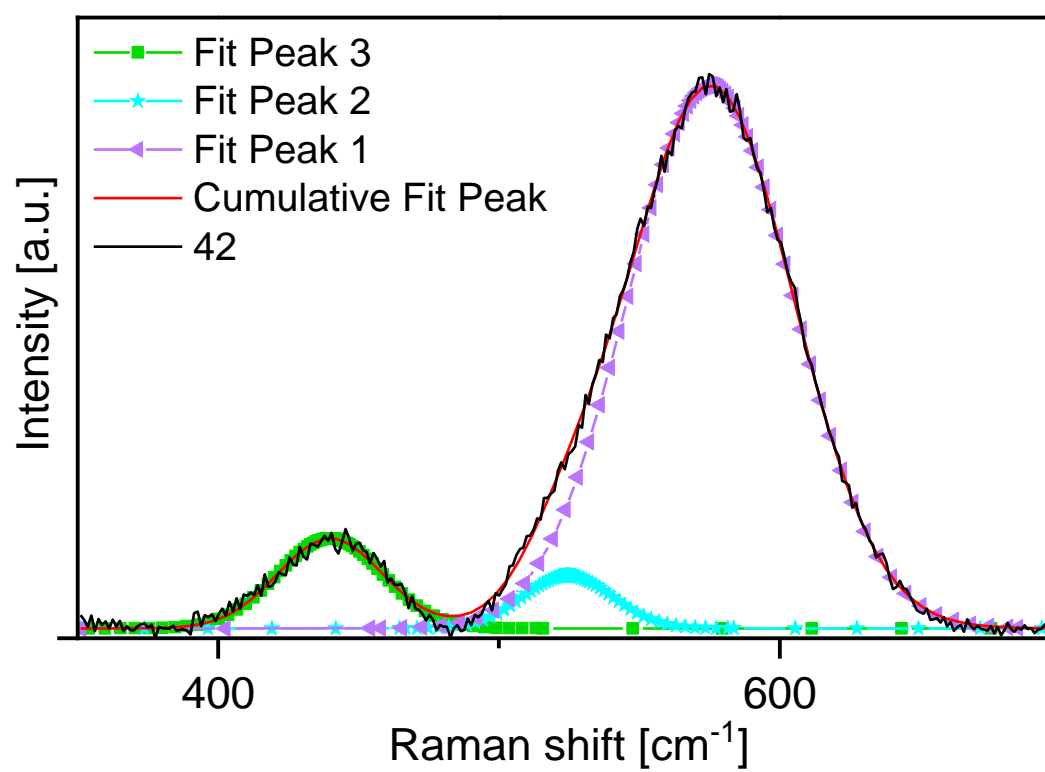
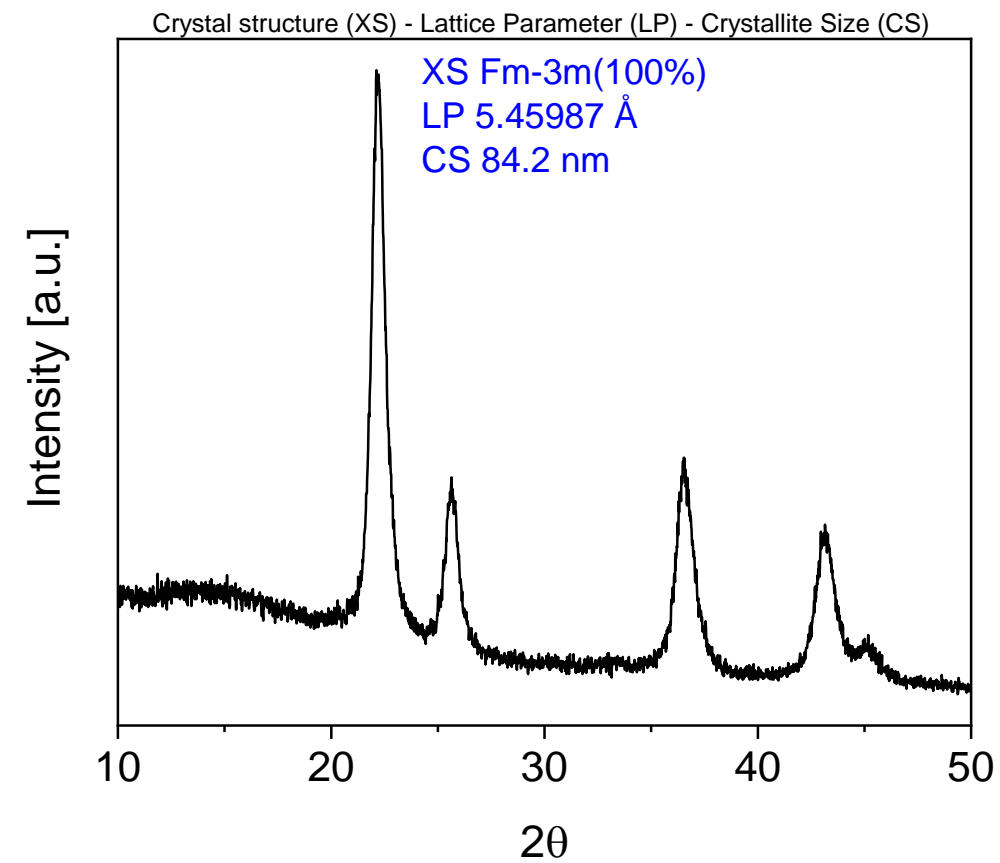
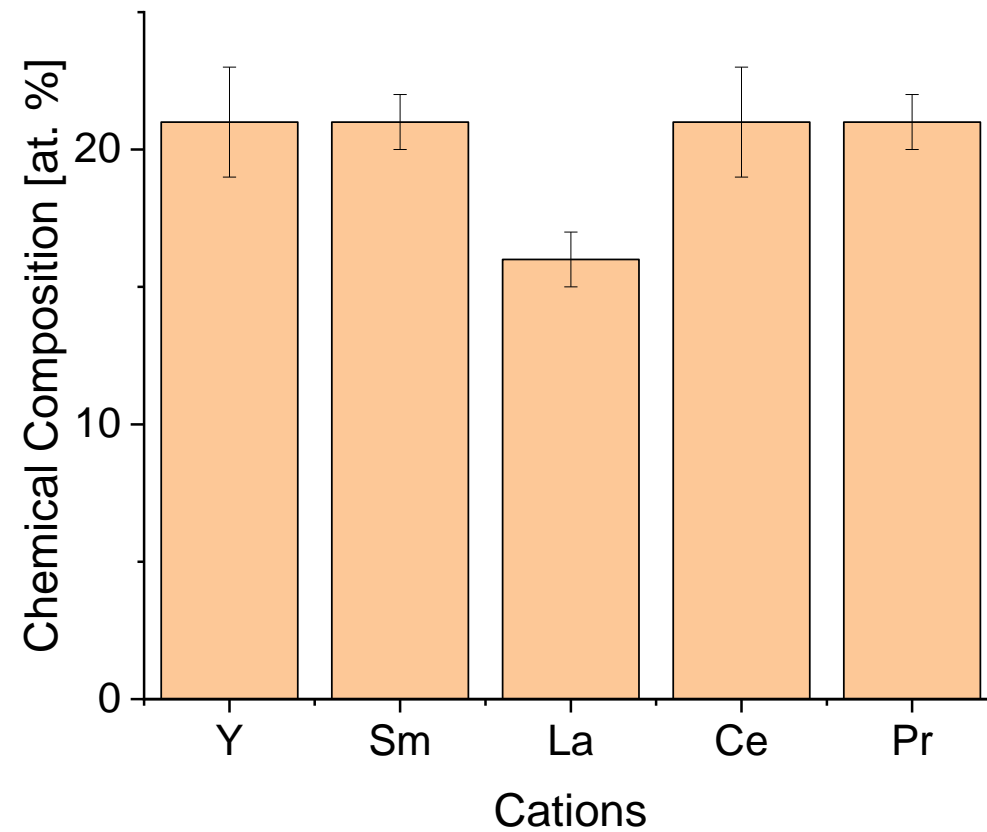
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



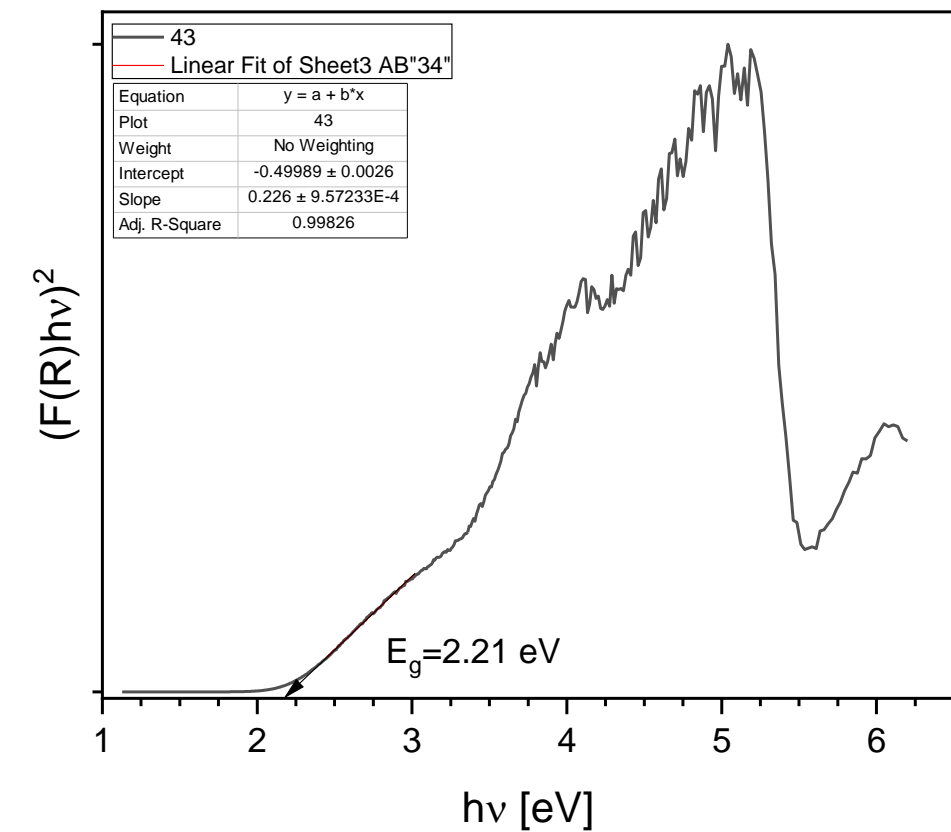
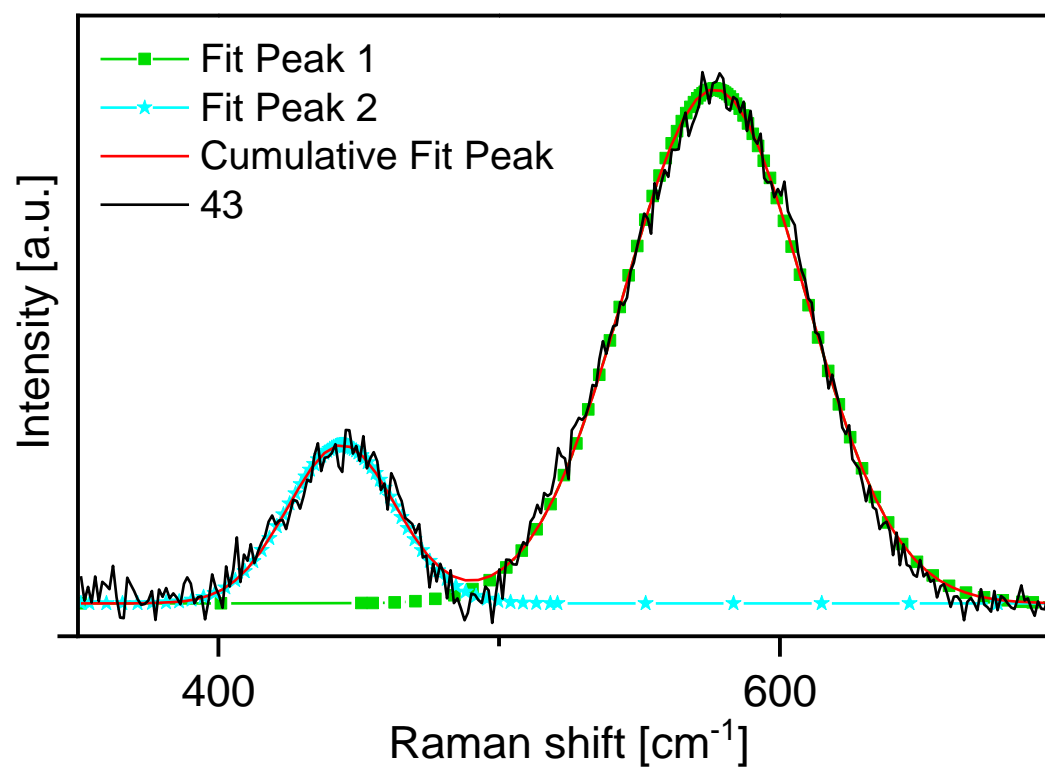
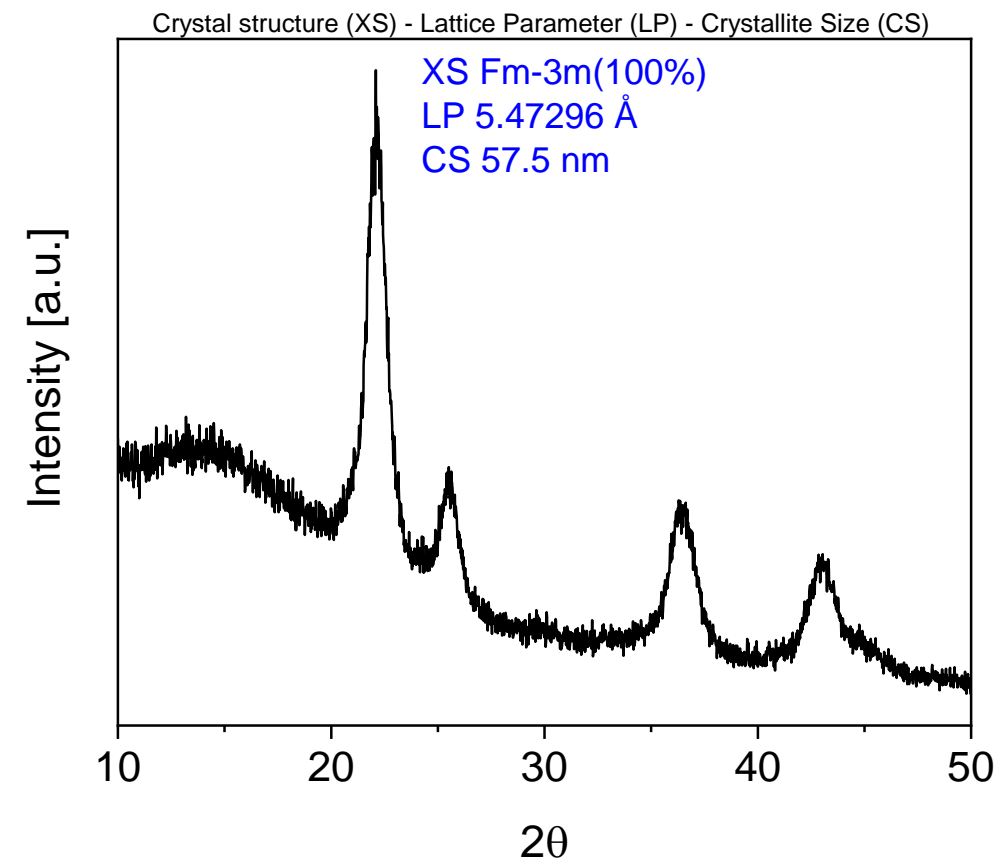
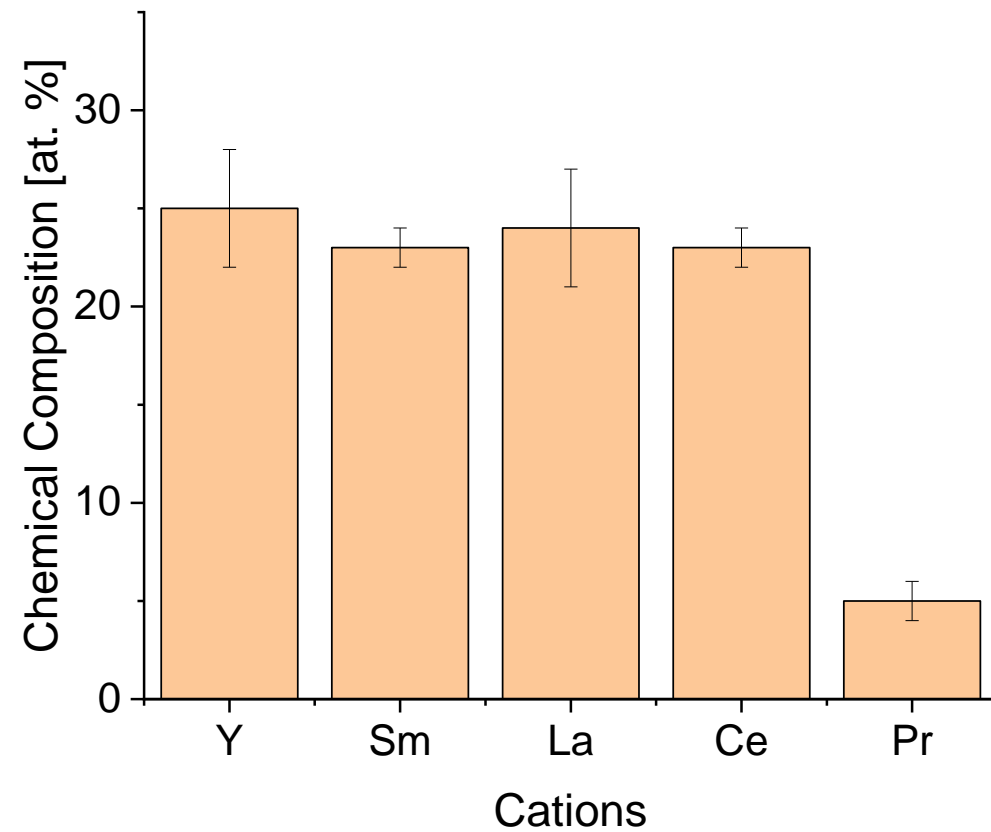
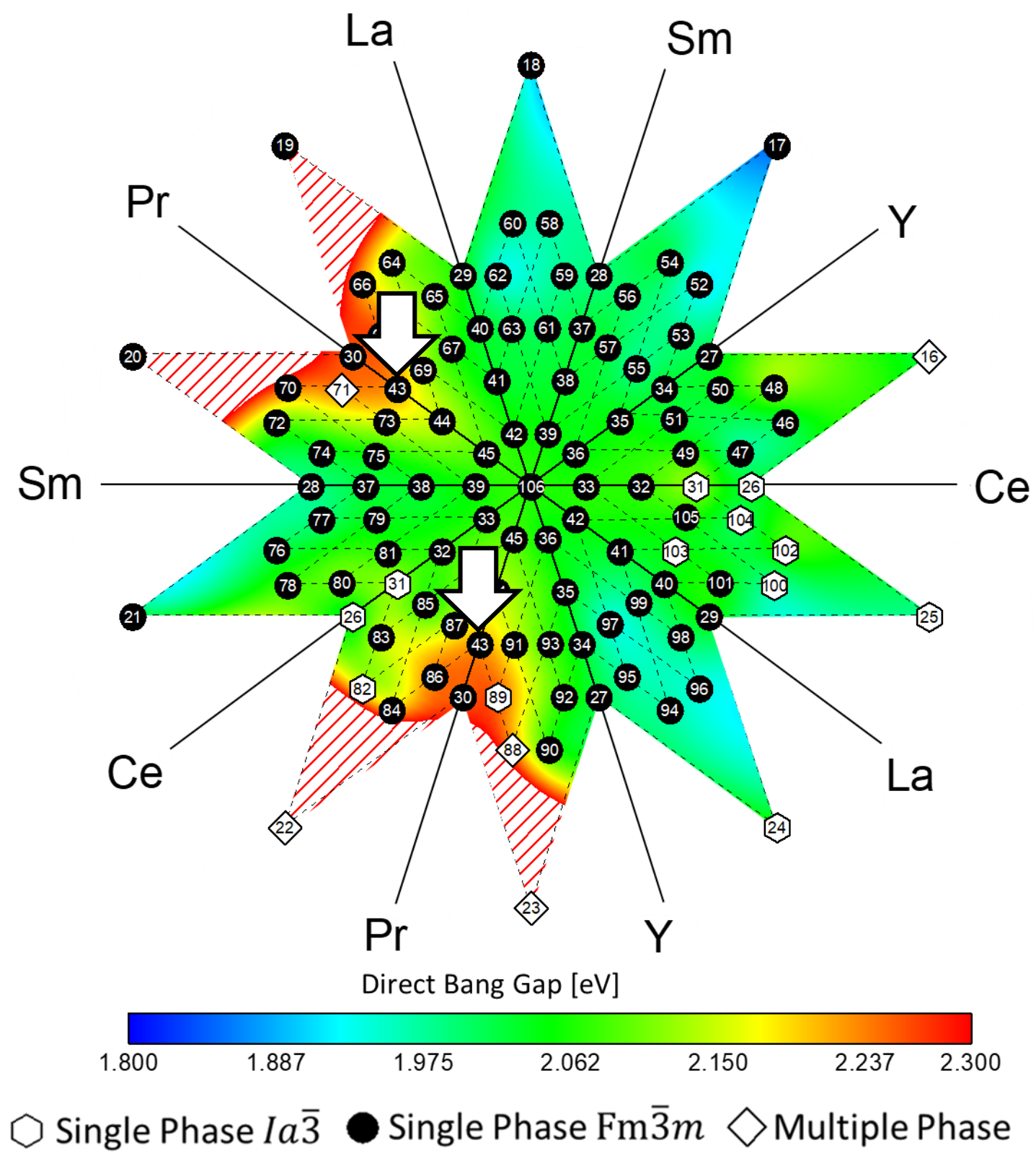
# Sample 42



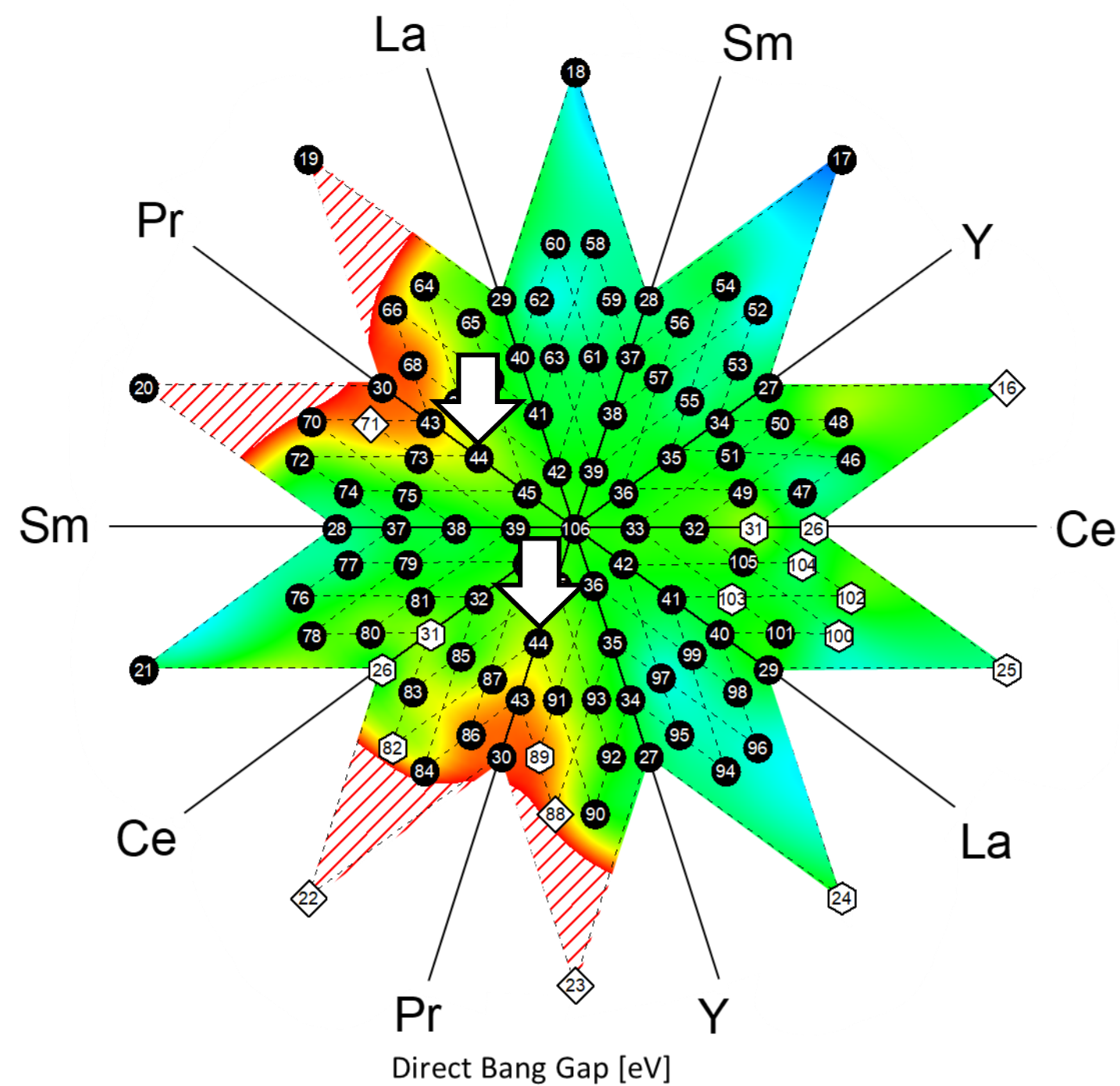
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



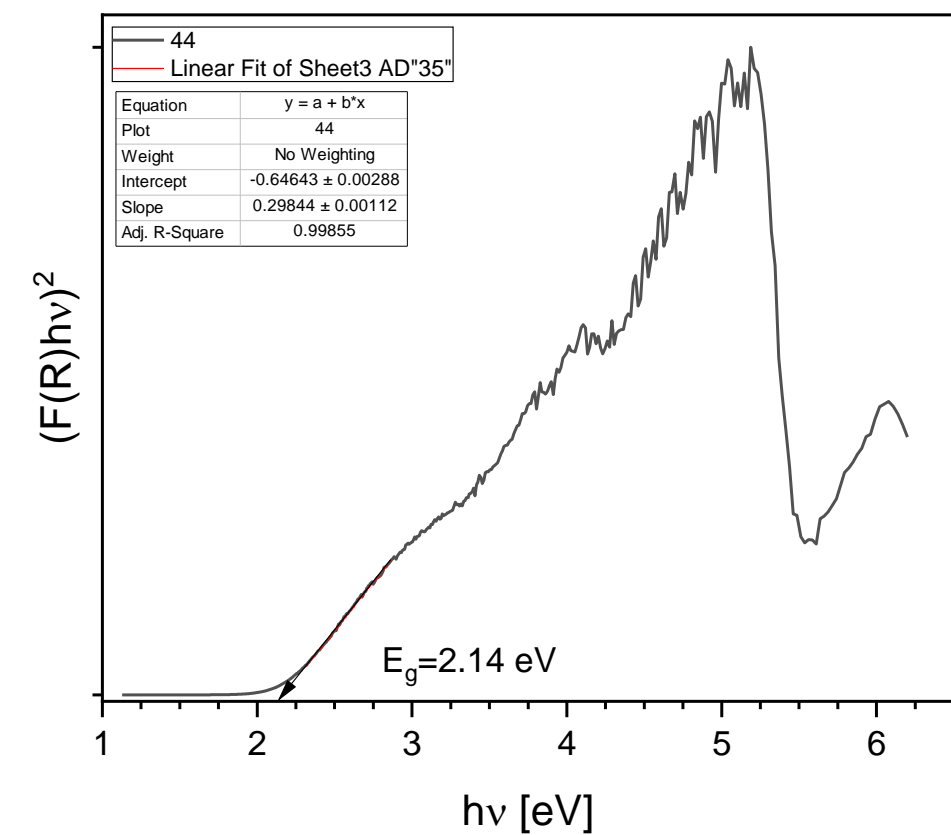
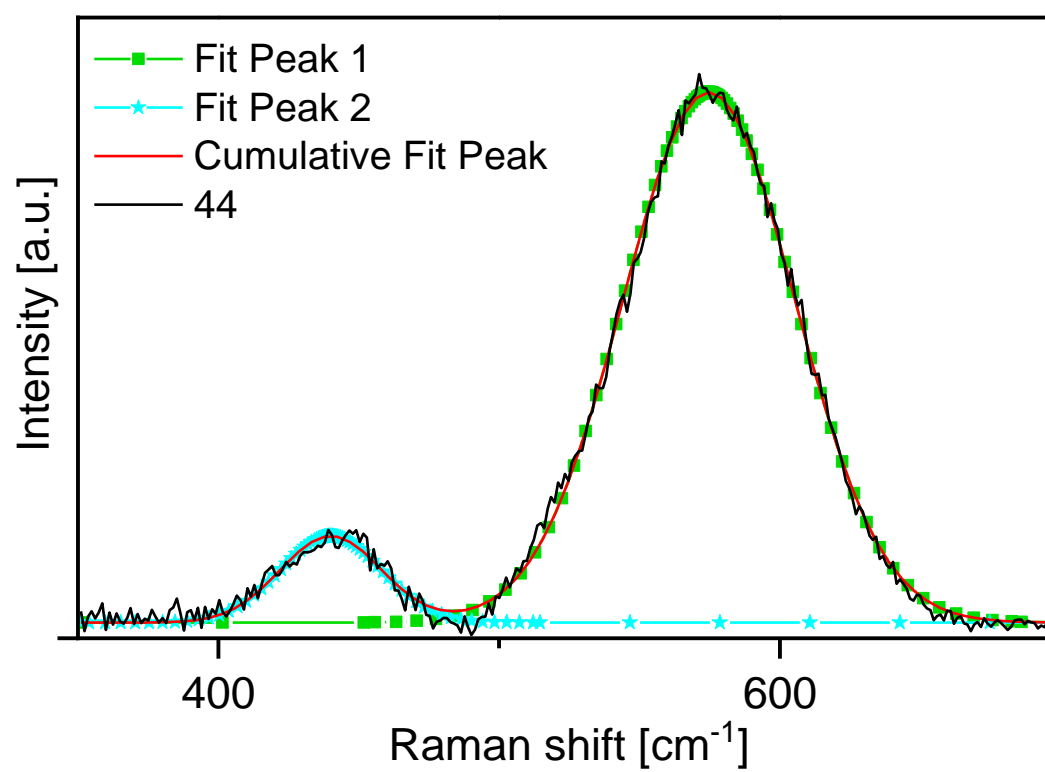
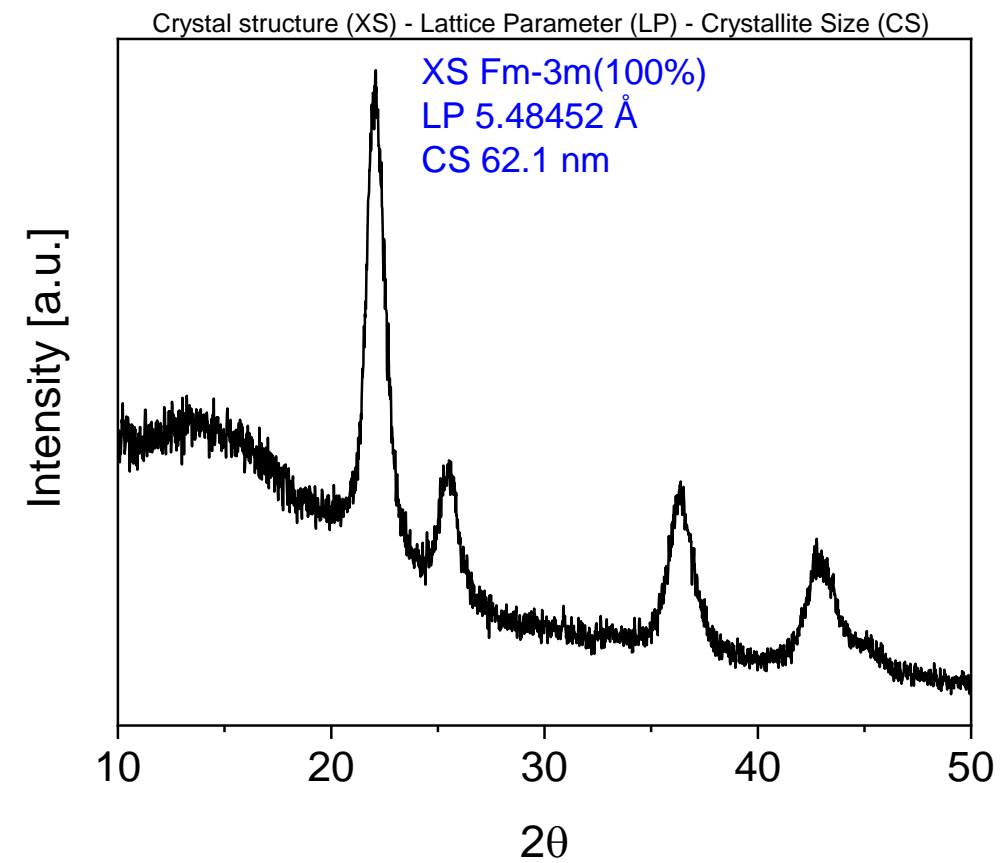
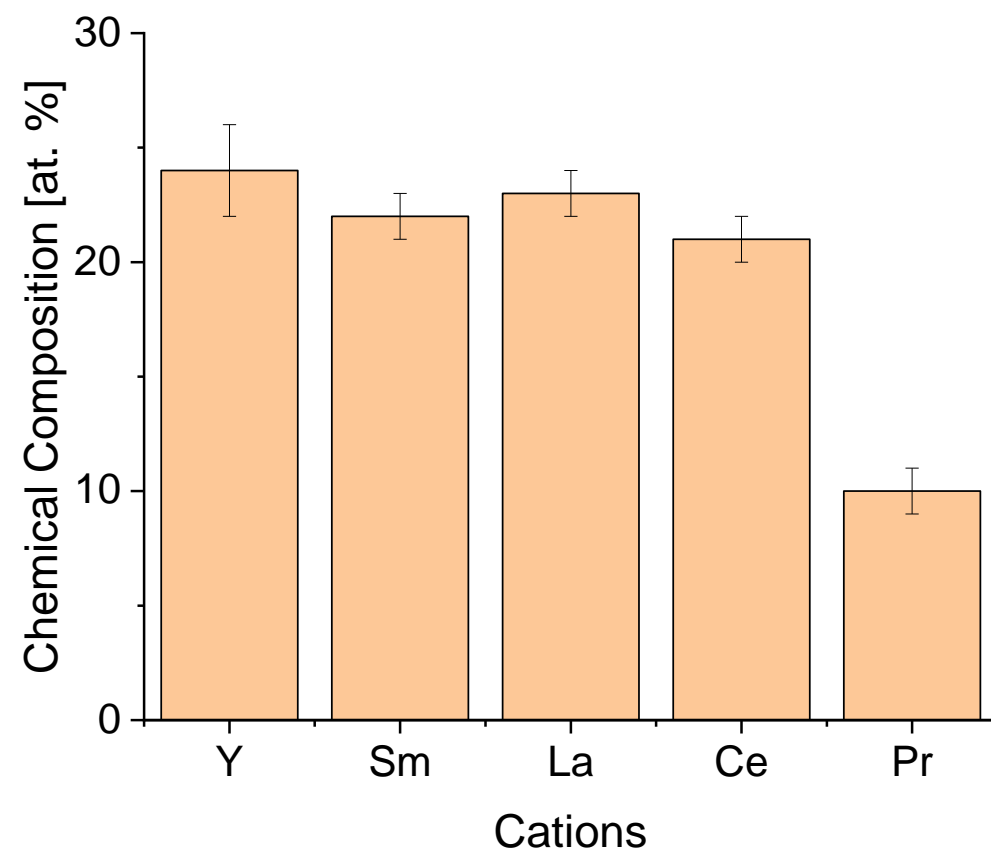
# Sample 43



# Sample 44

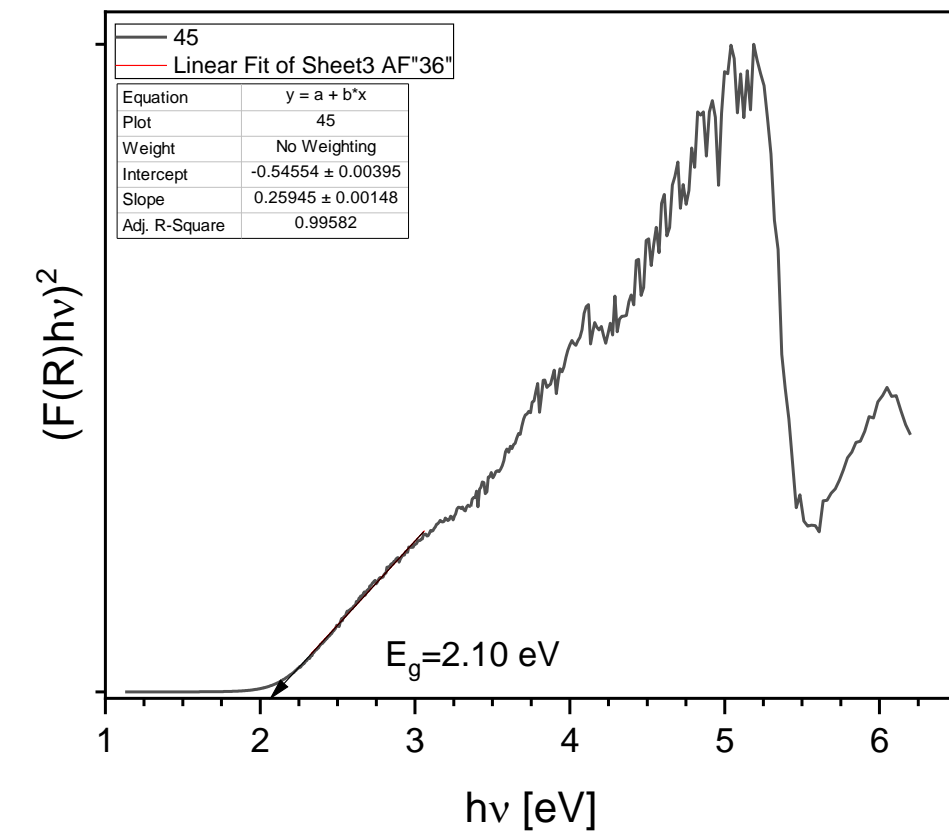
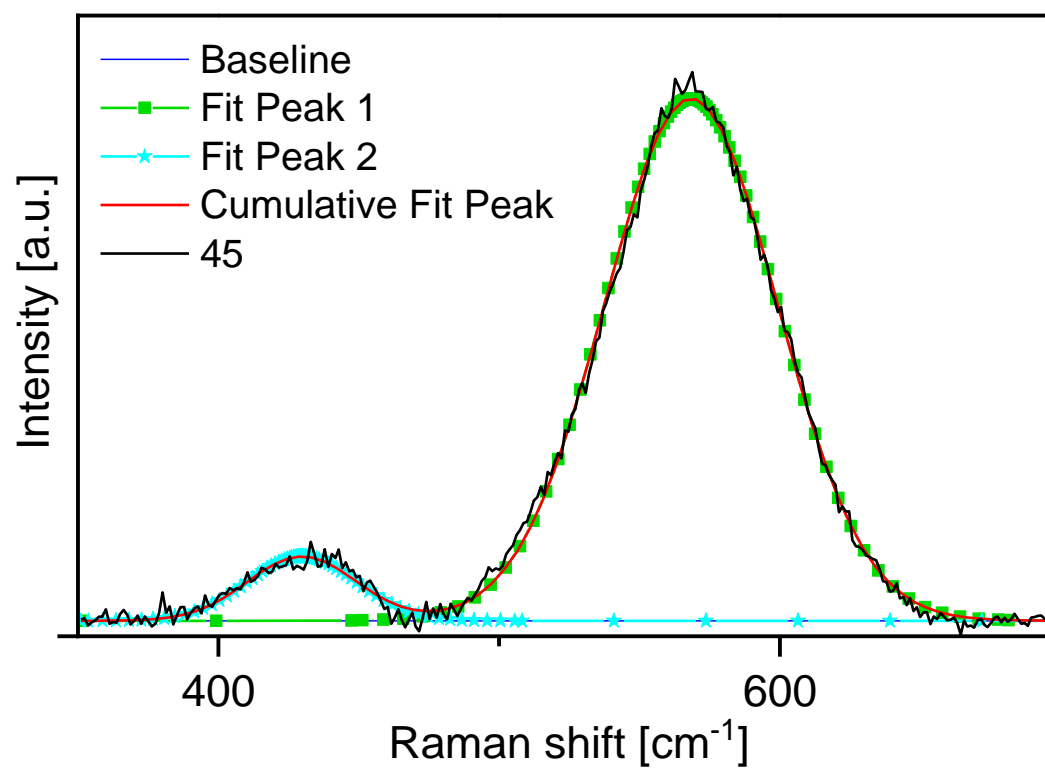
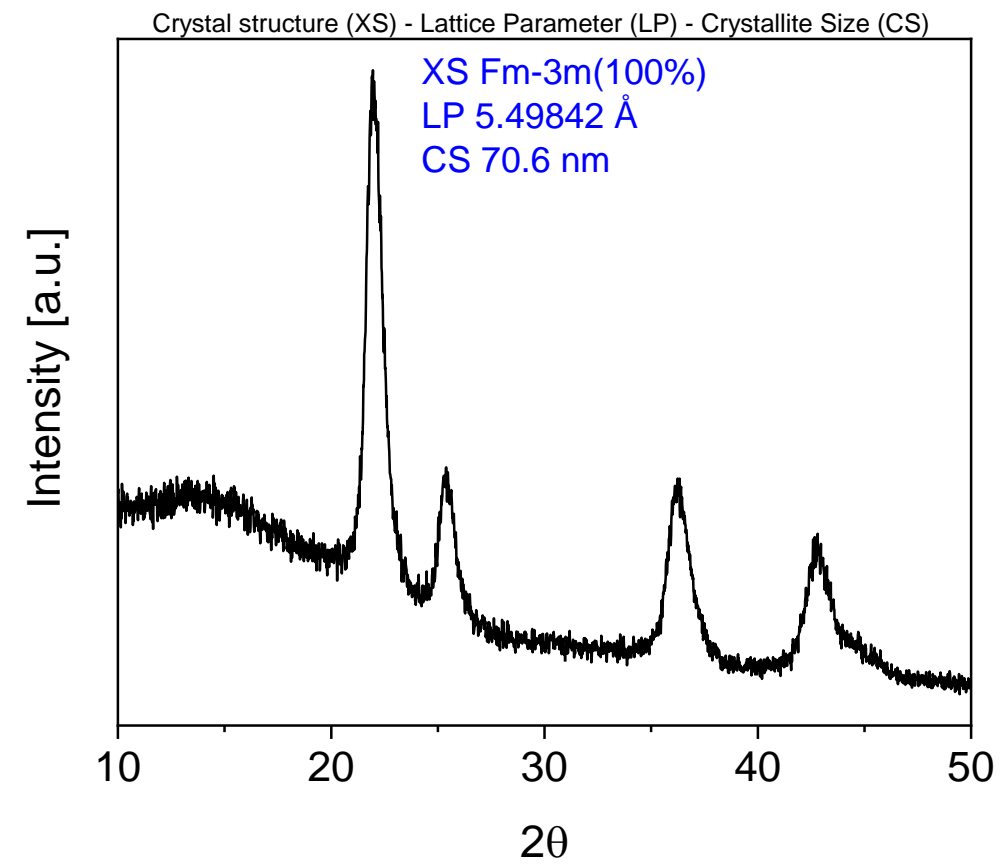
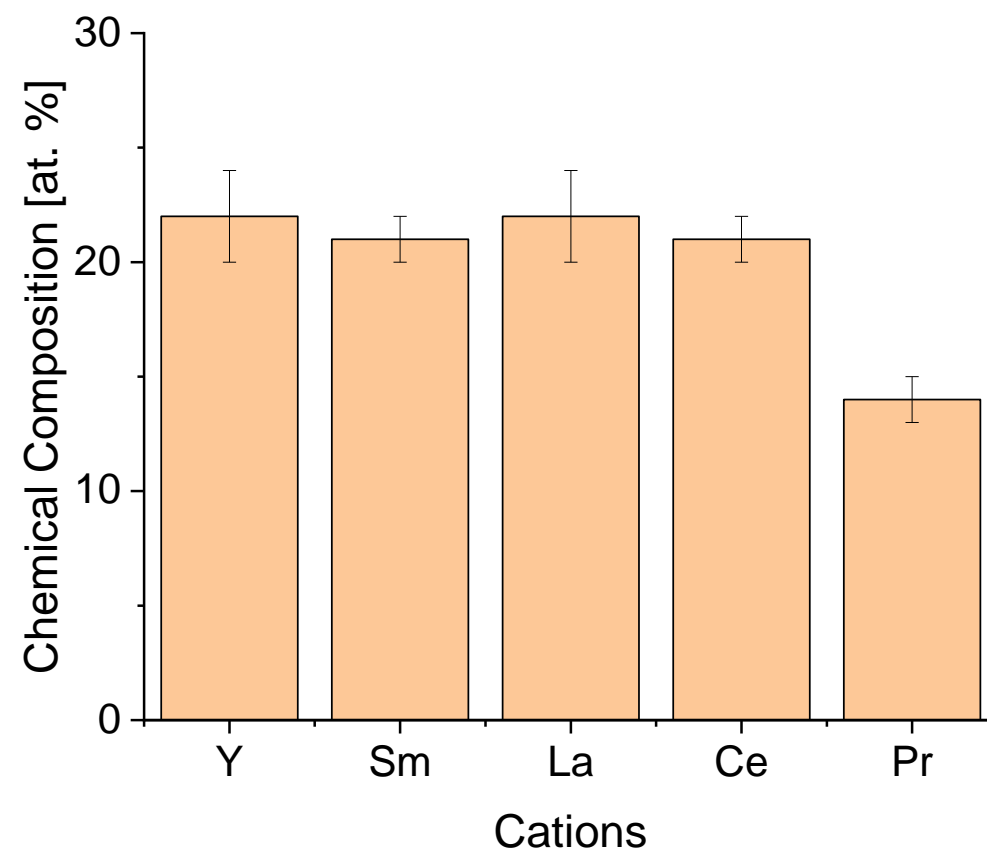
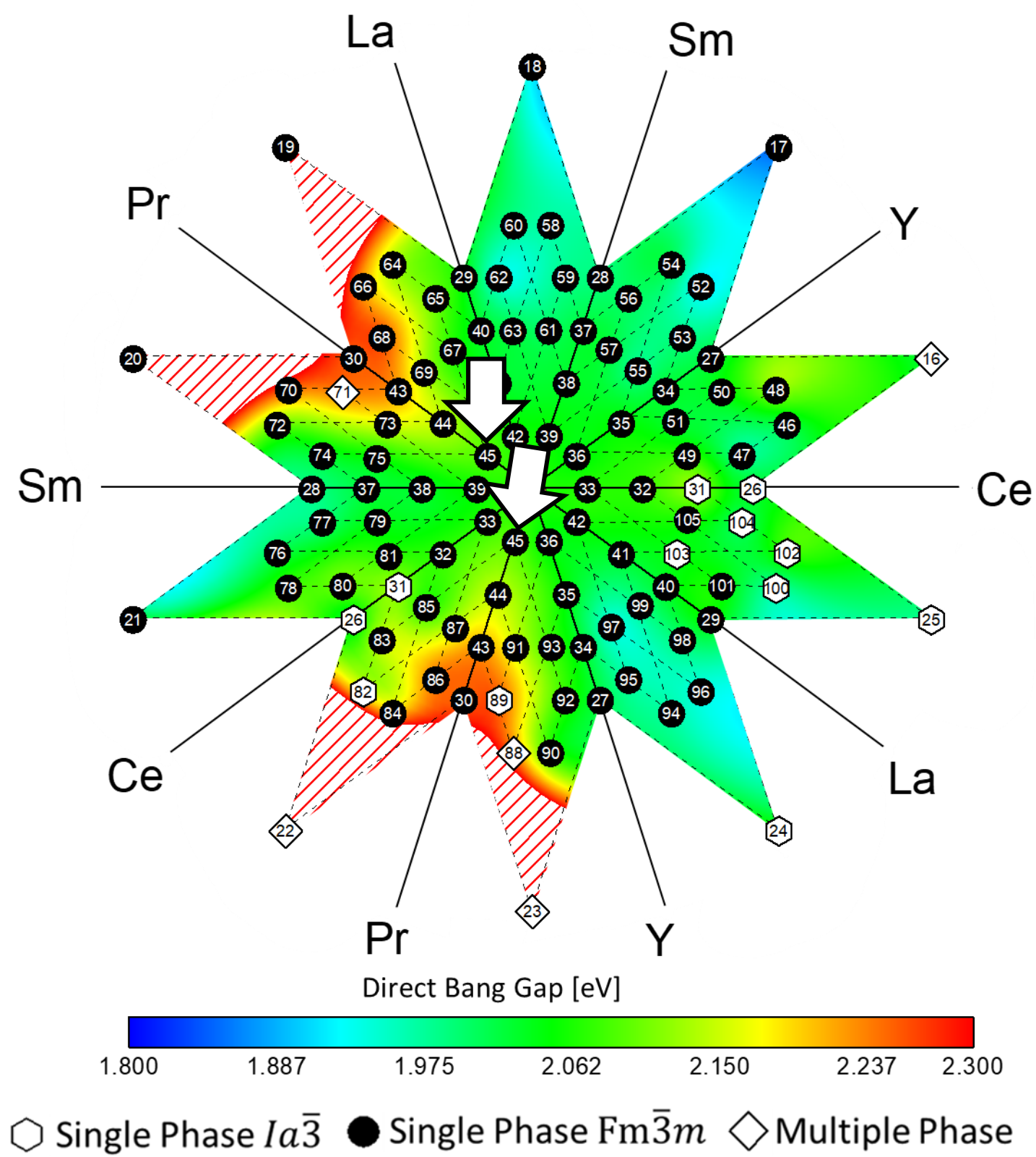


○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◇ Multiple Phase



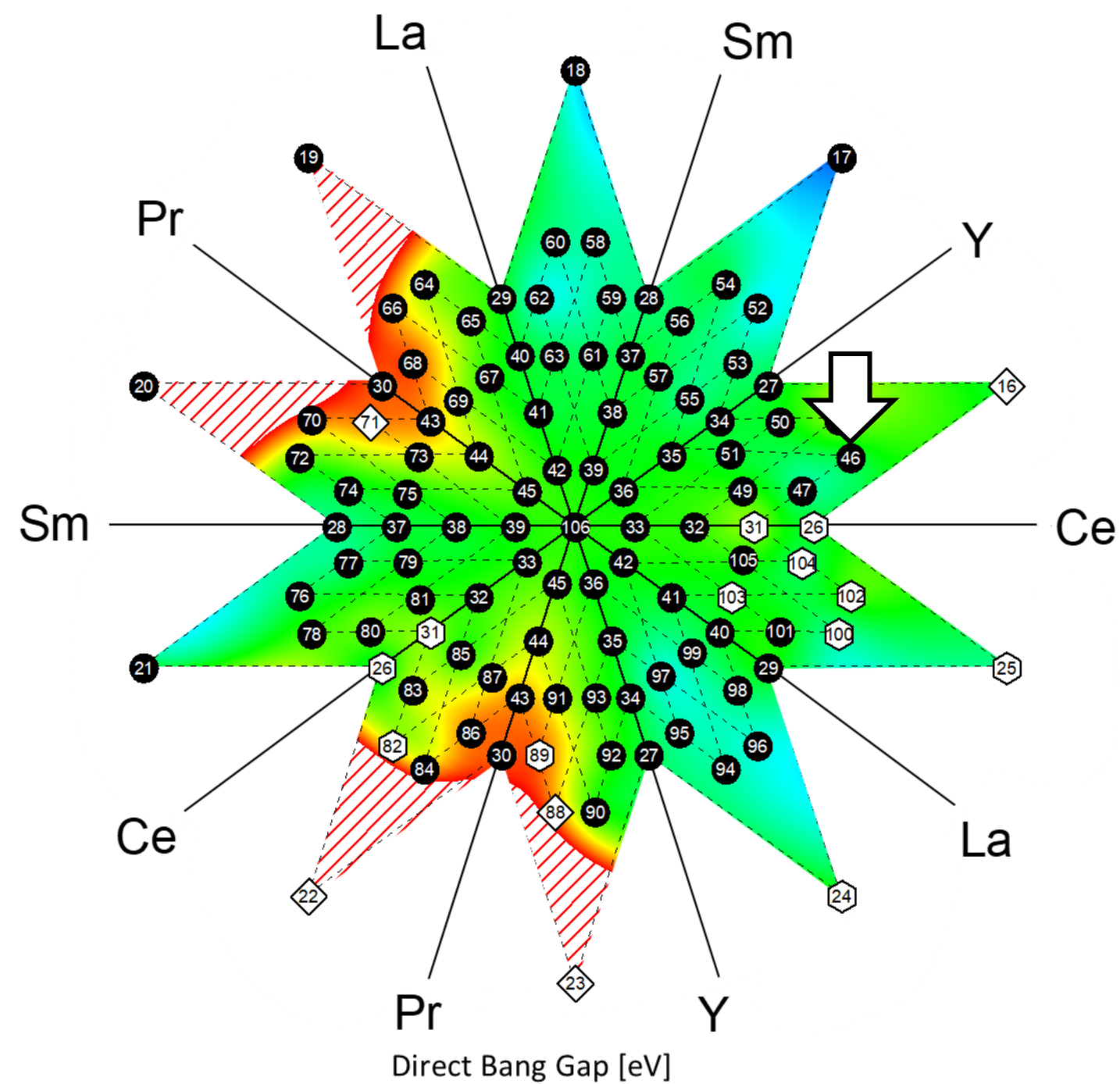


# Sample 45

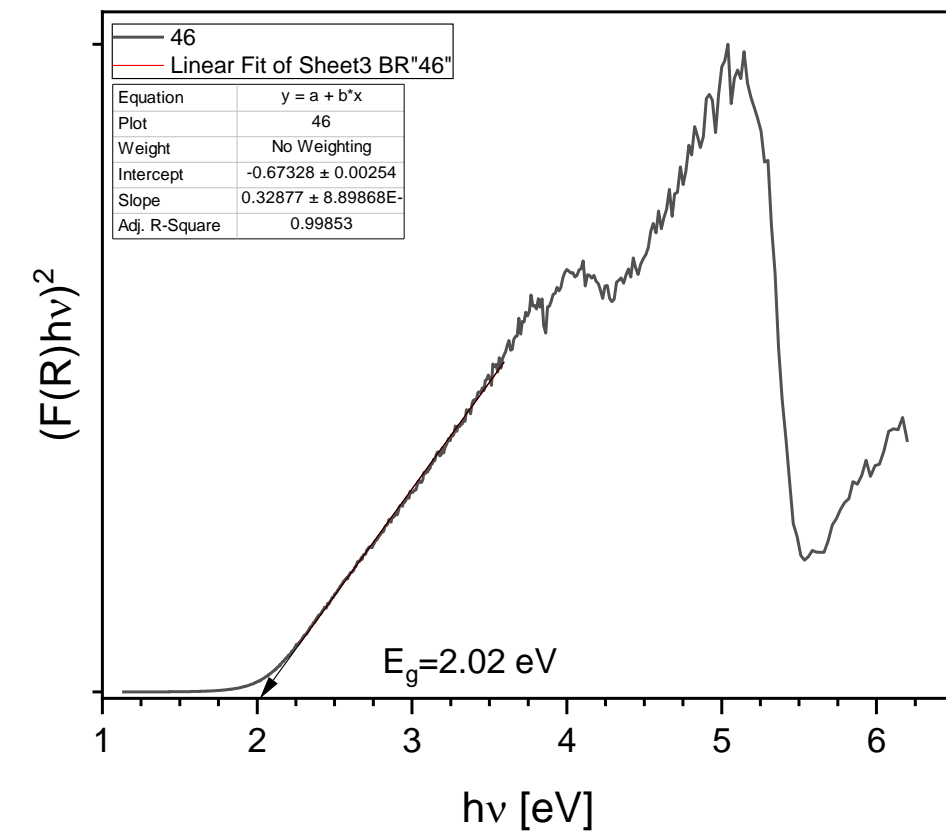
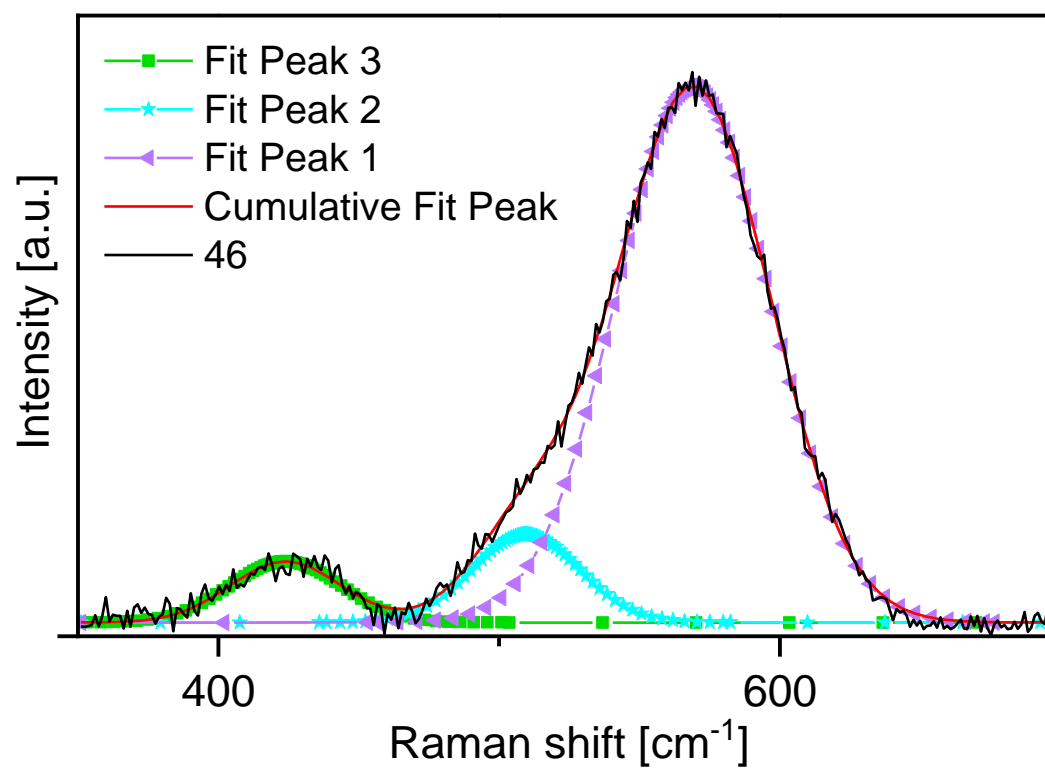
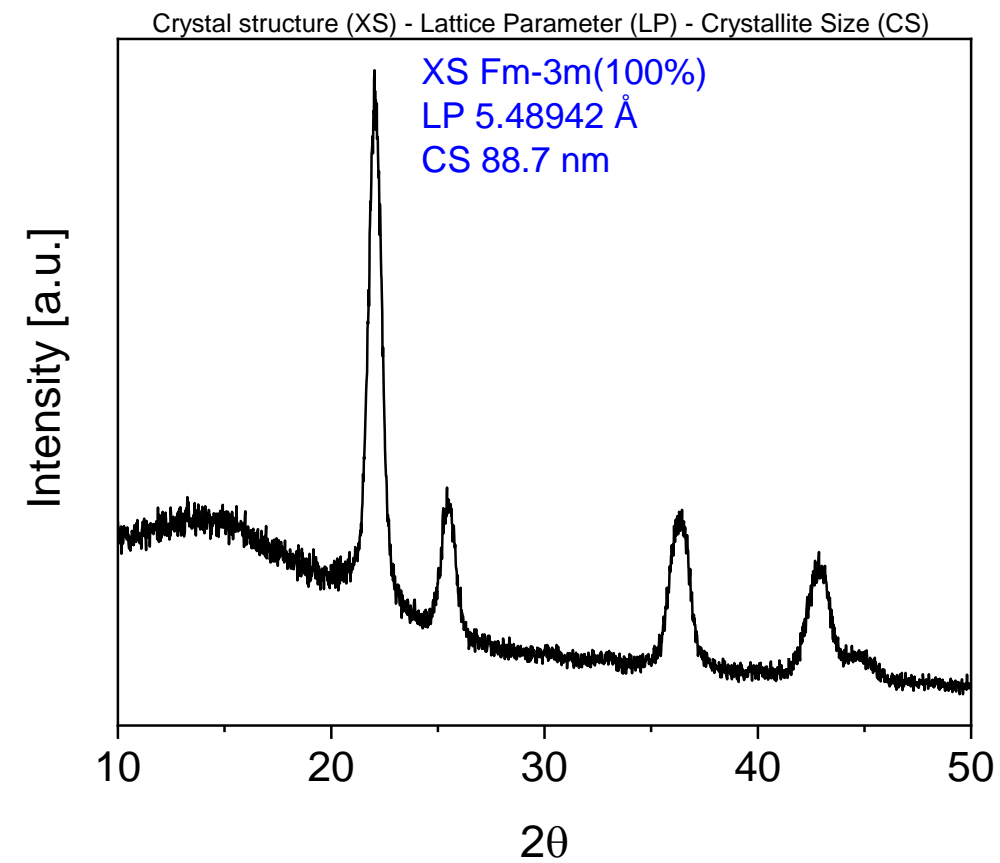
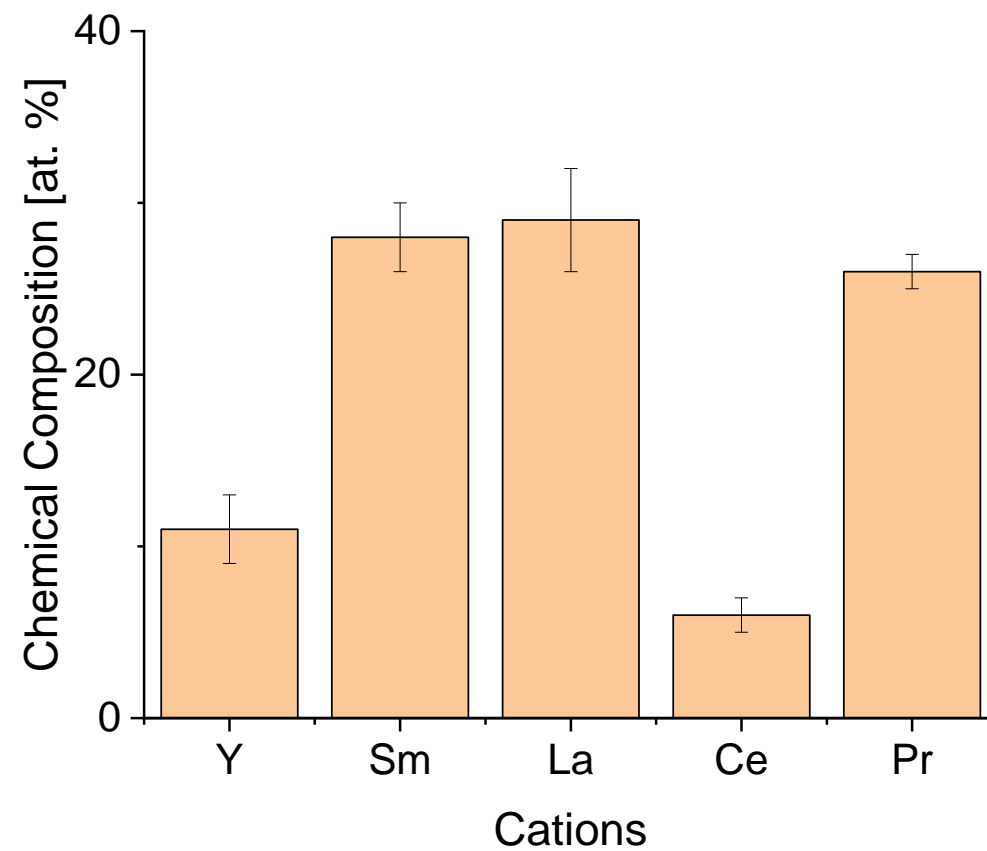




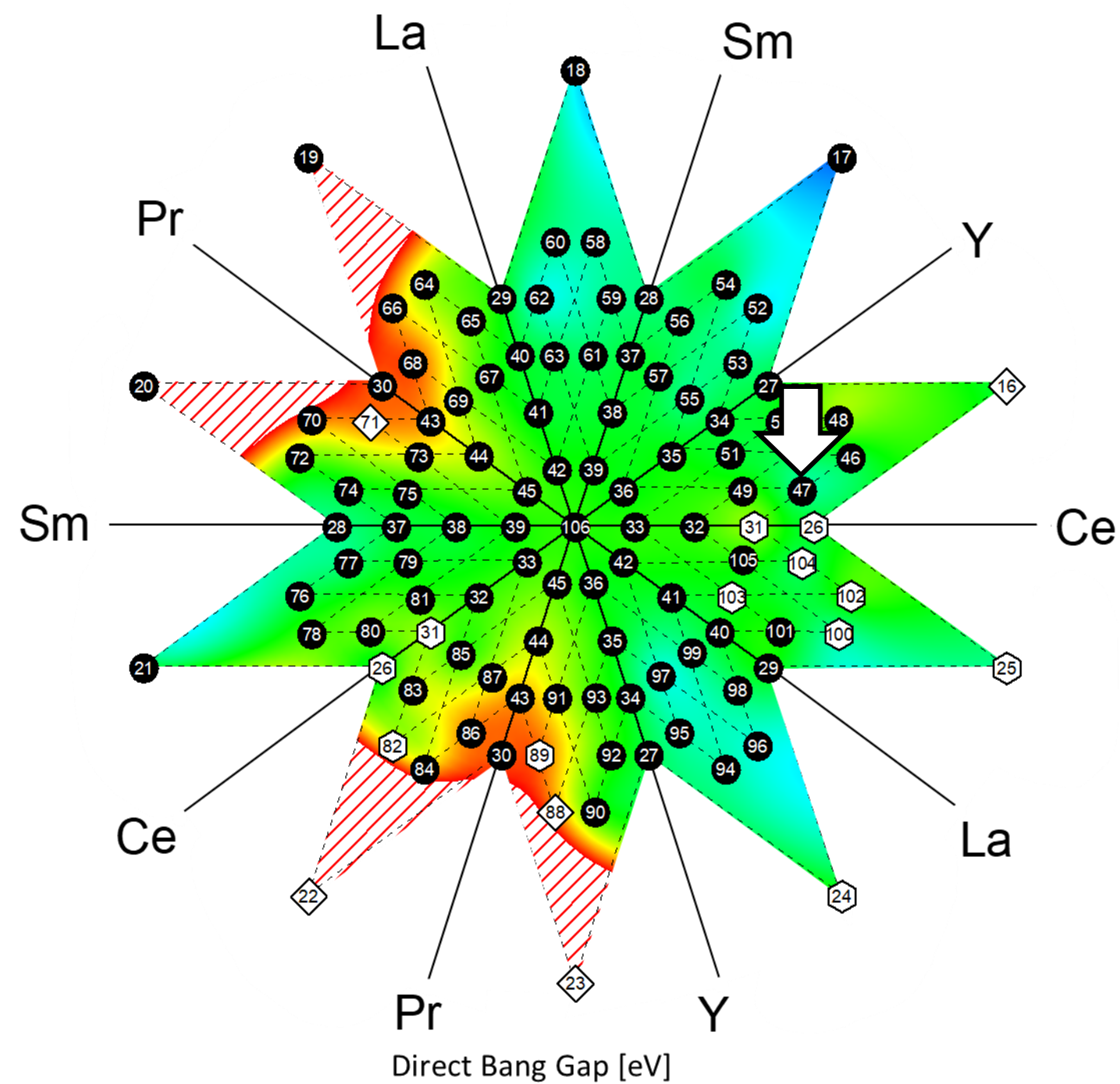
# Sample 46



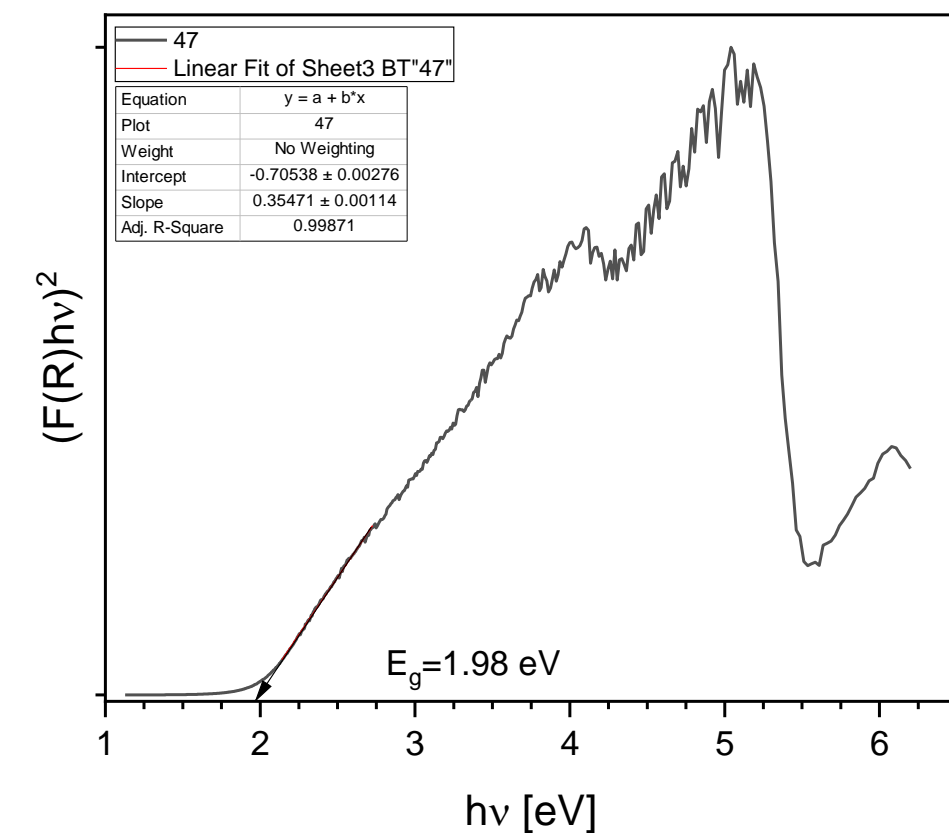
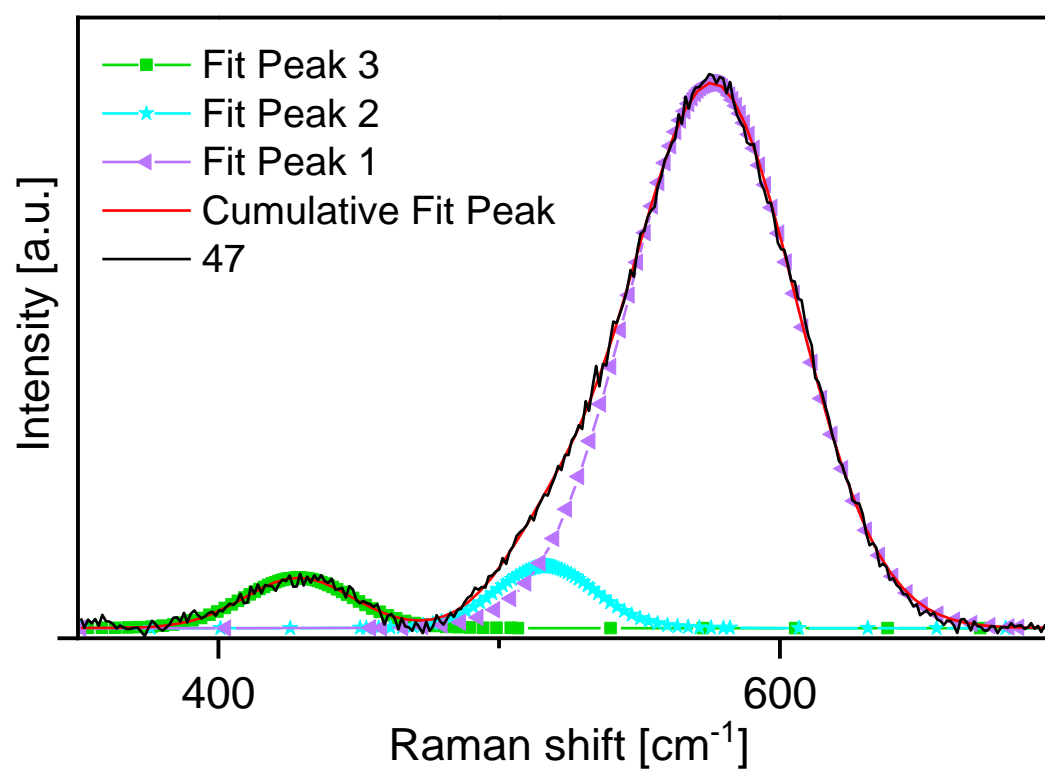
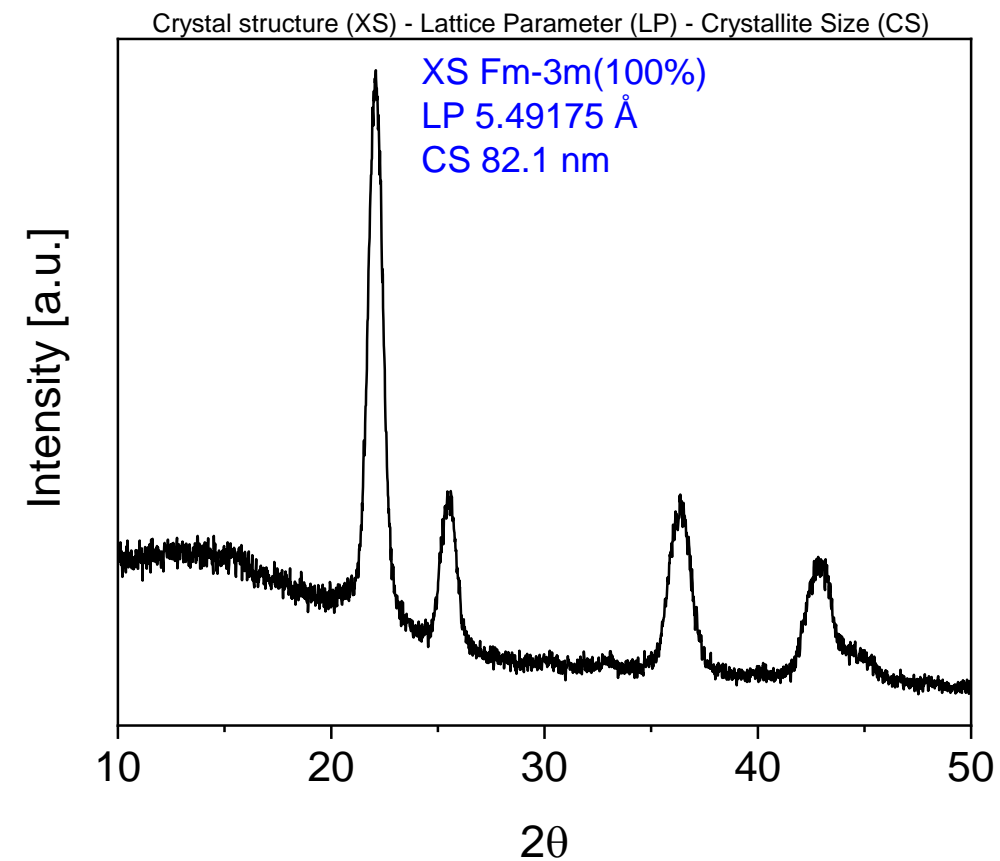
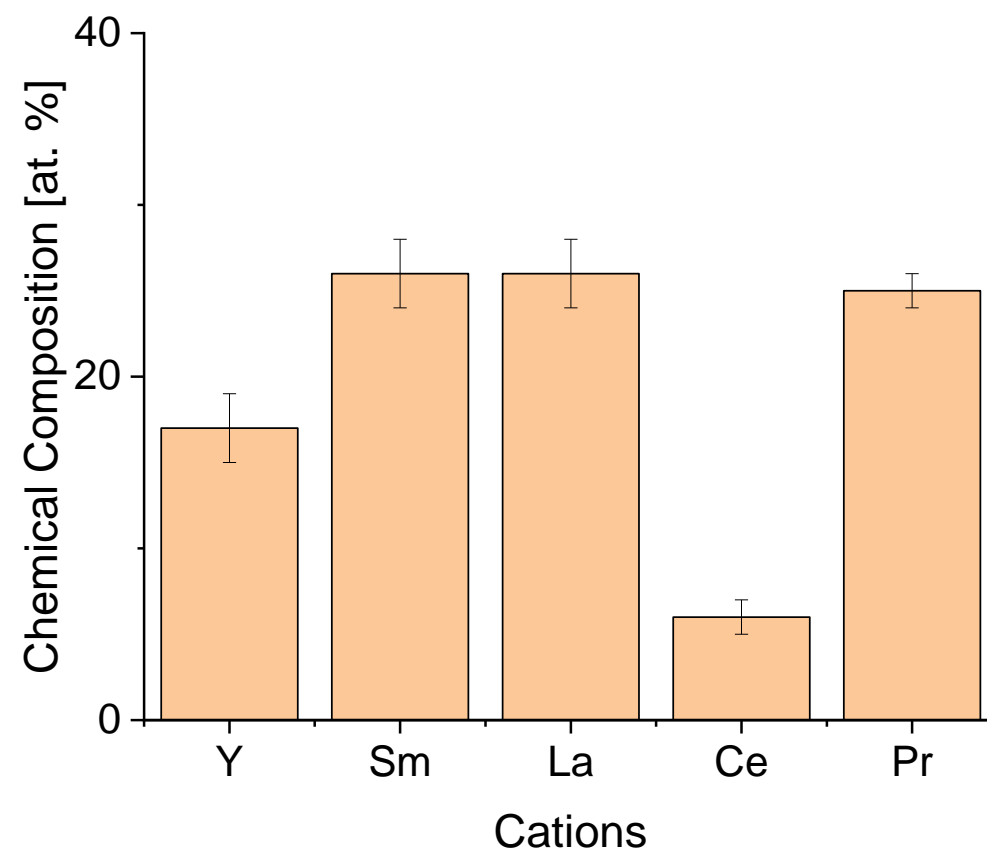
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



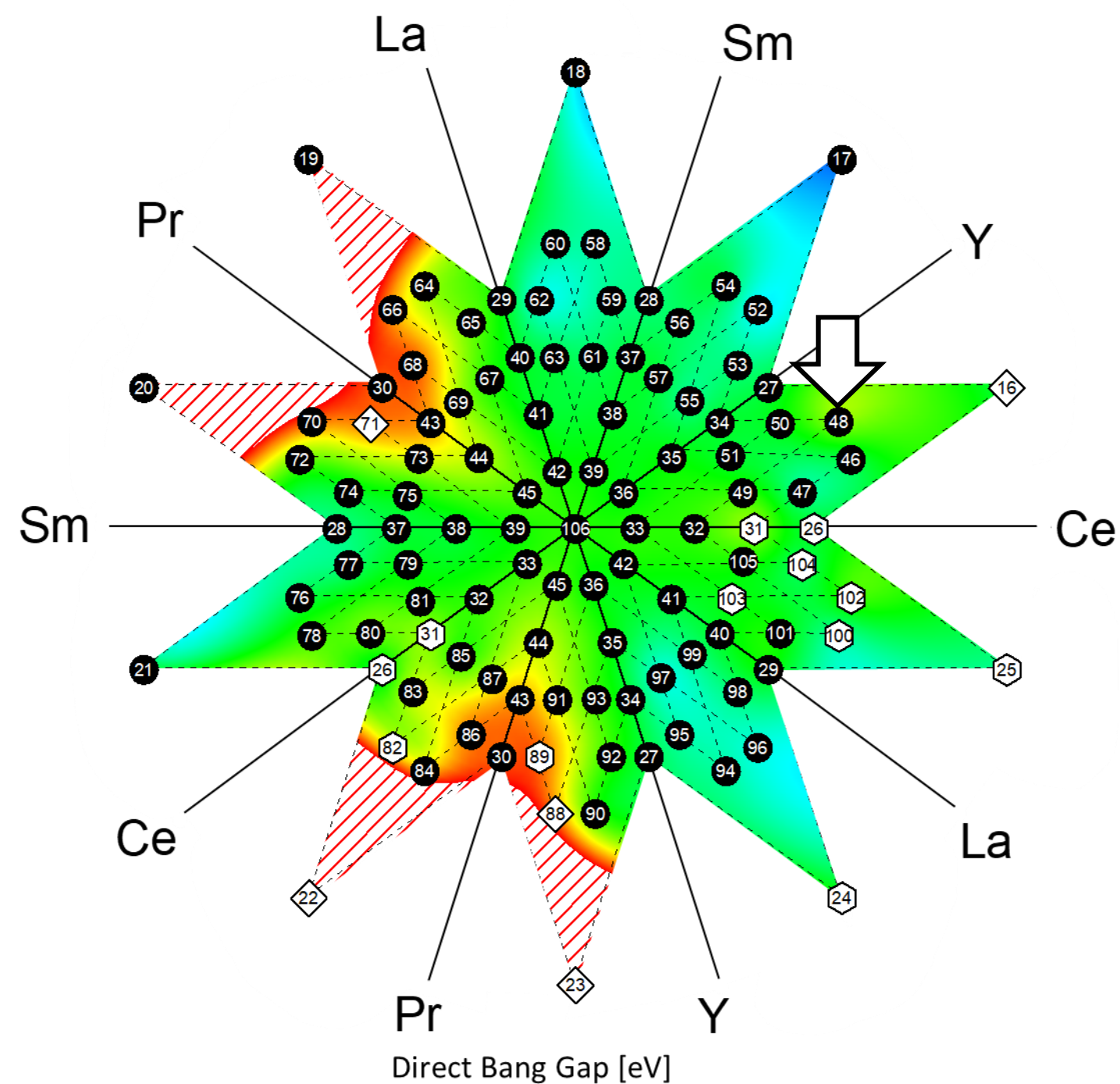
# Sample 47



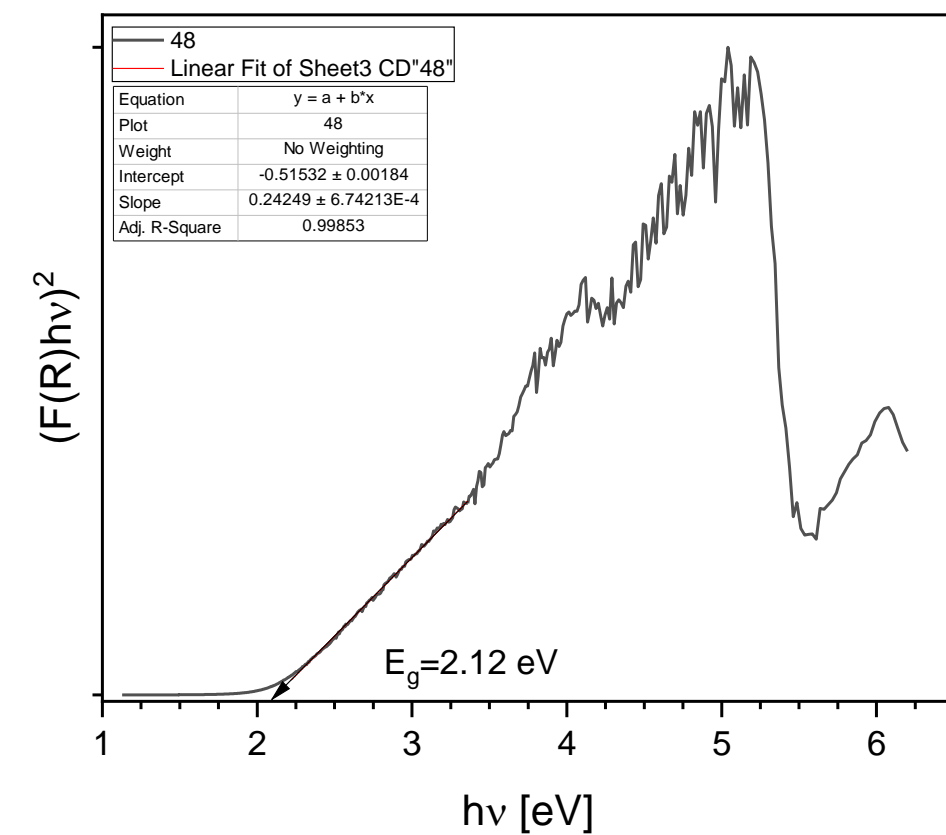
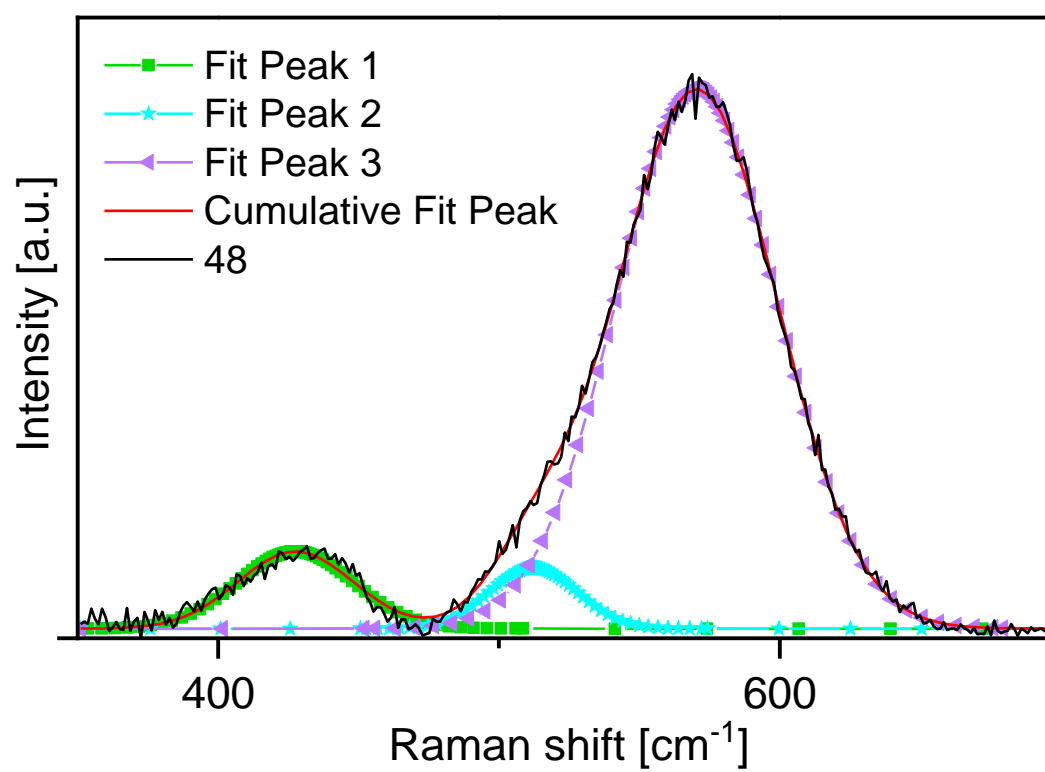
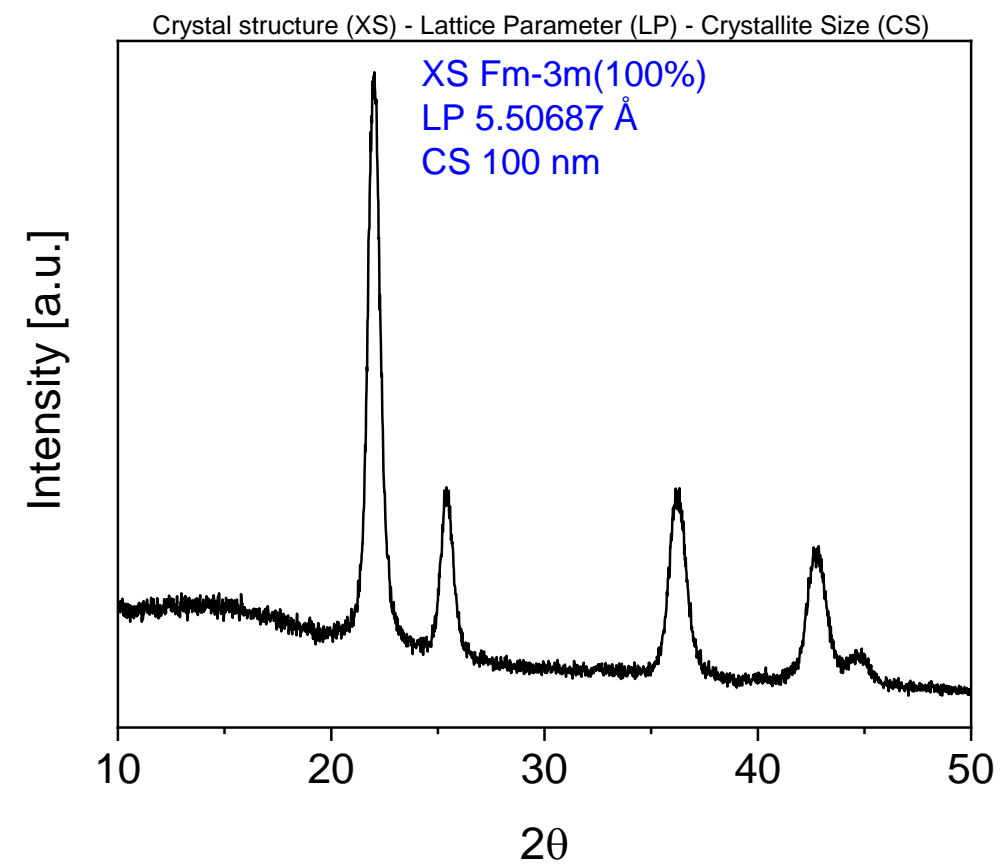
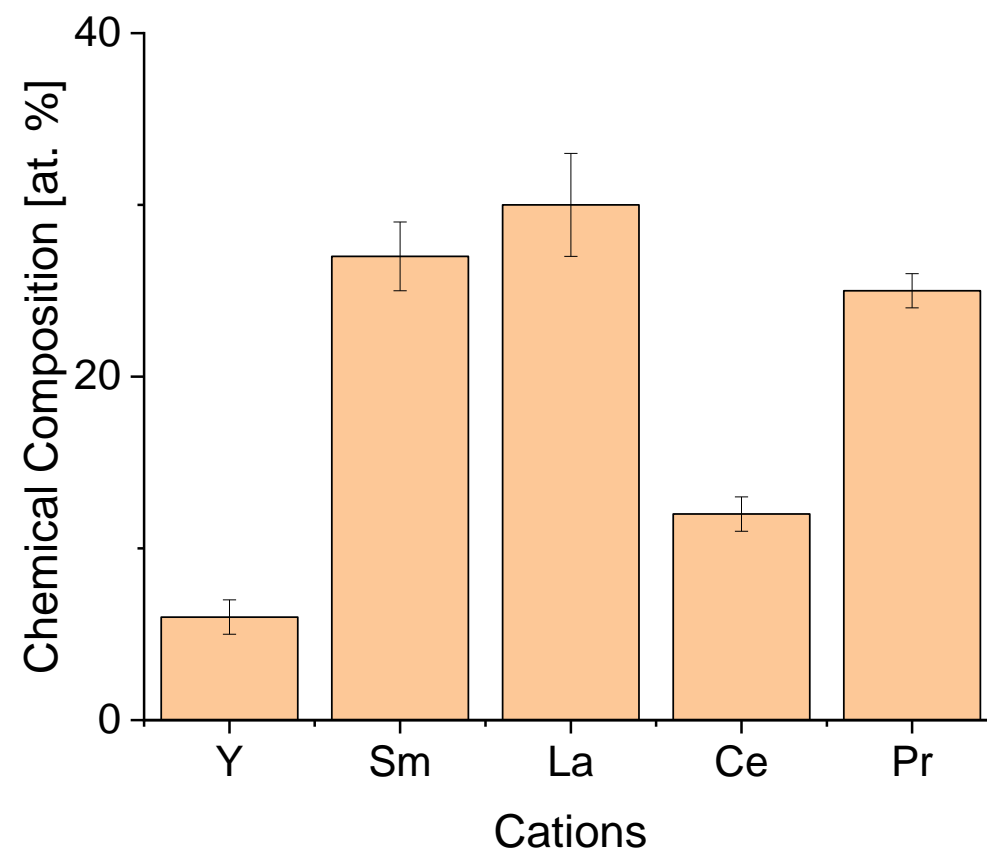
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



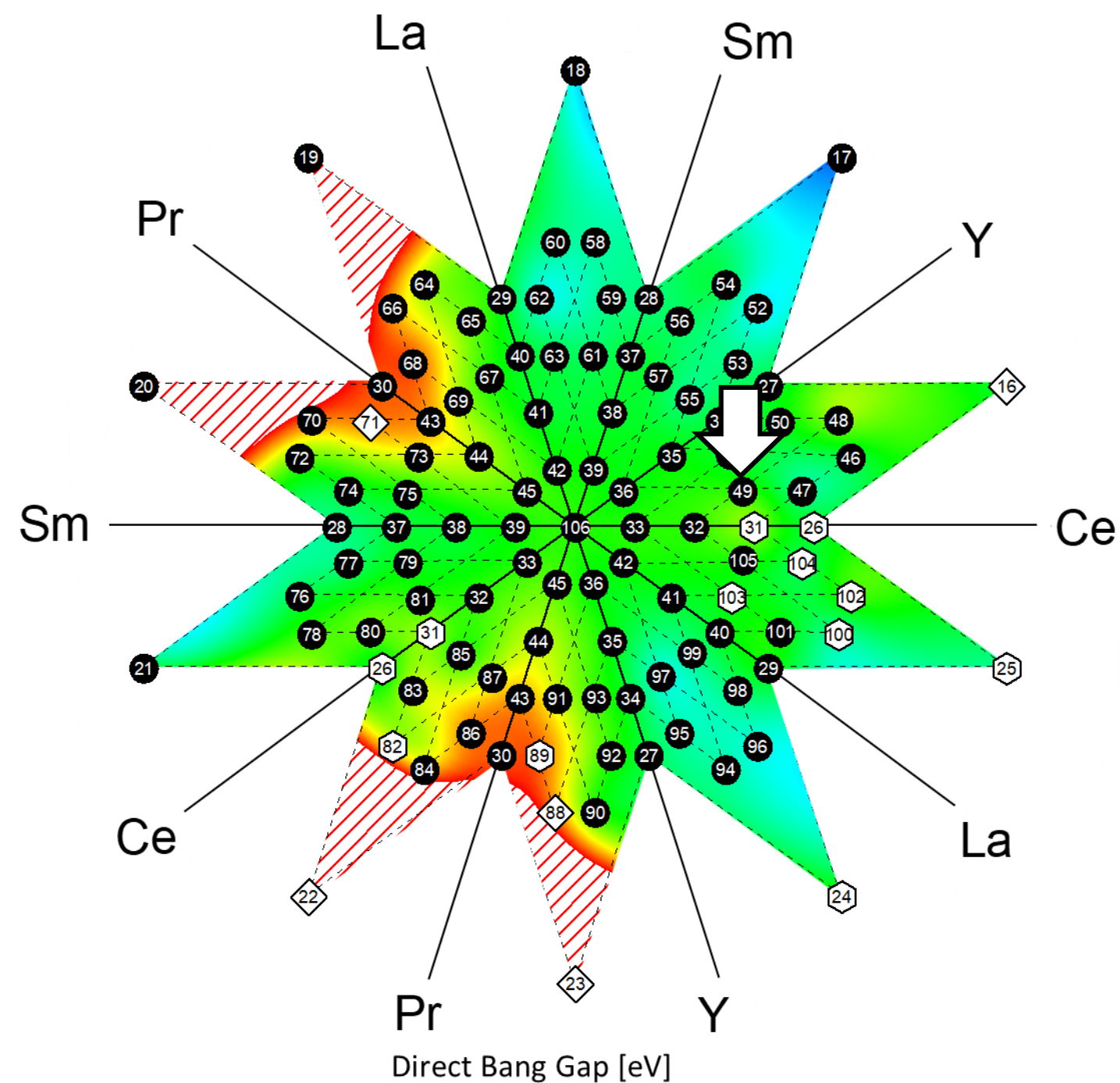
# Sample 48



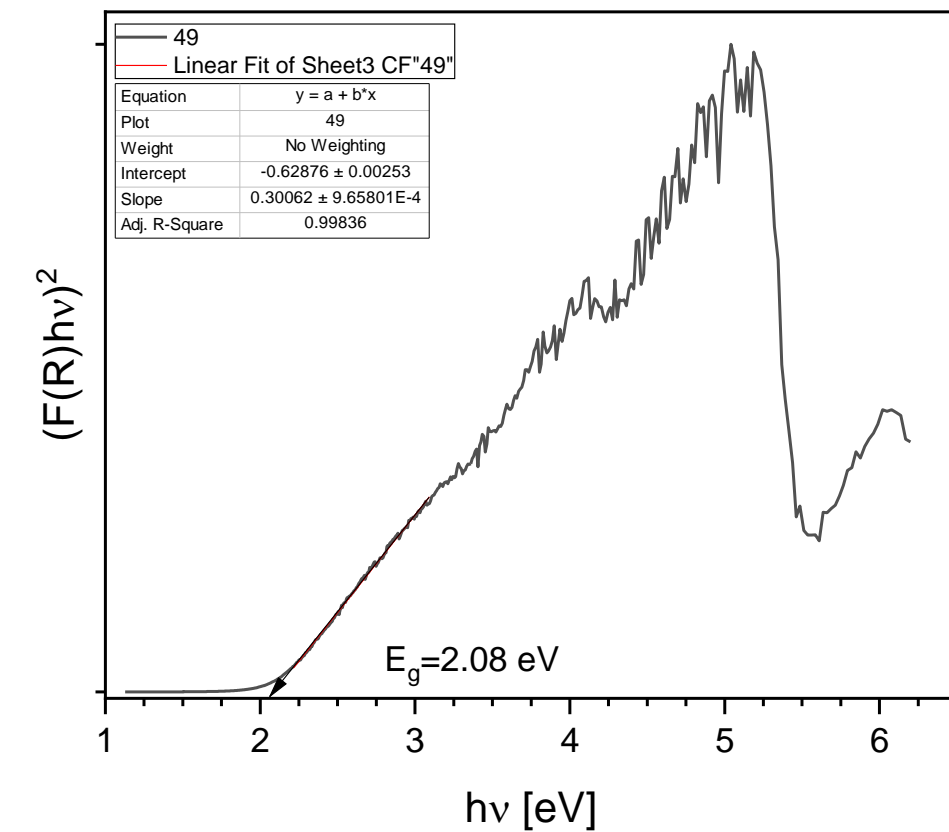
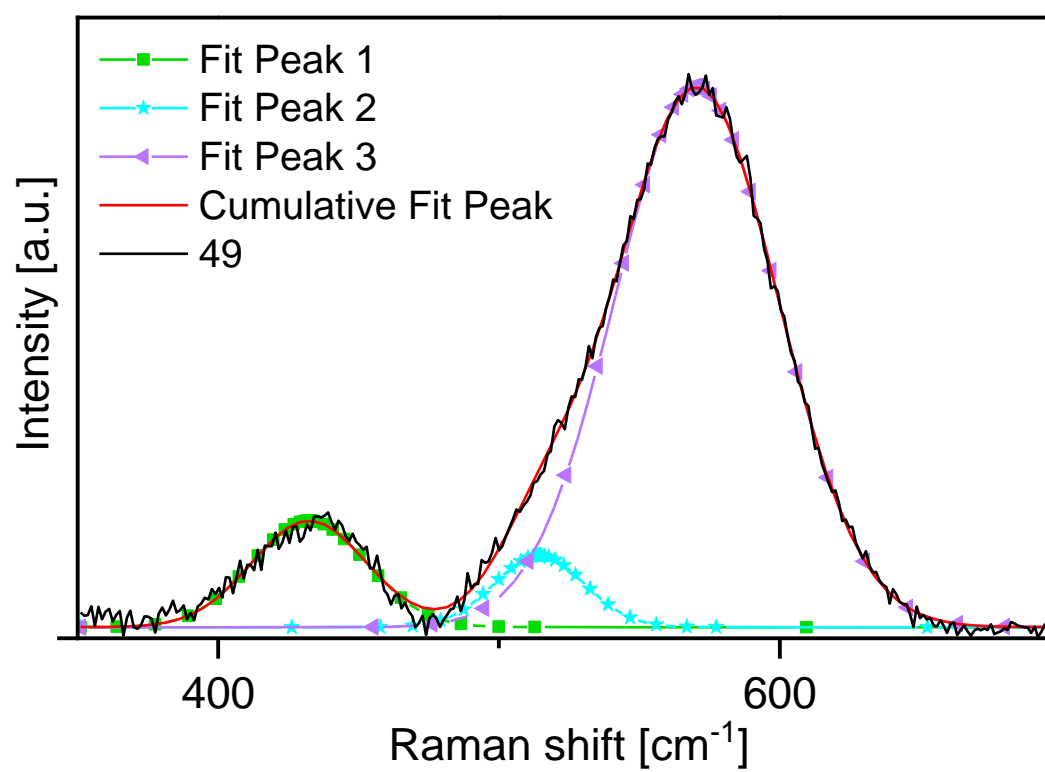
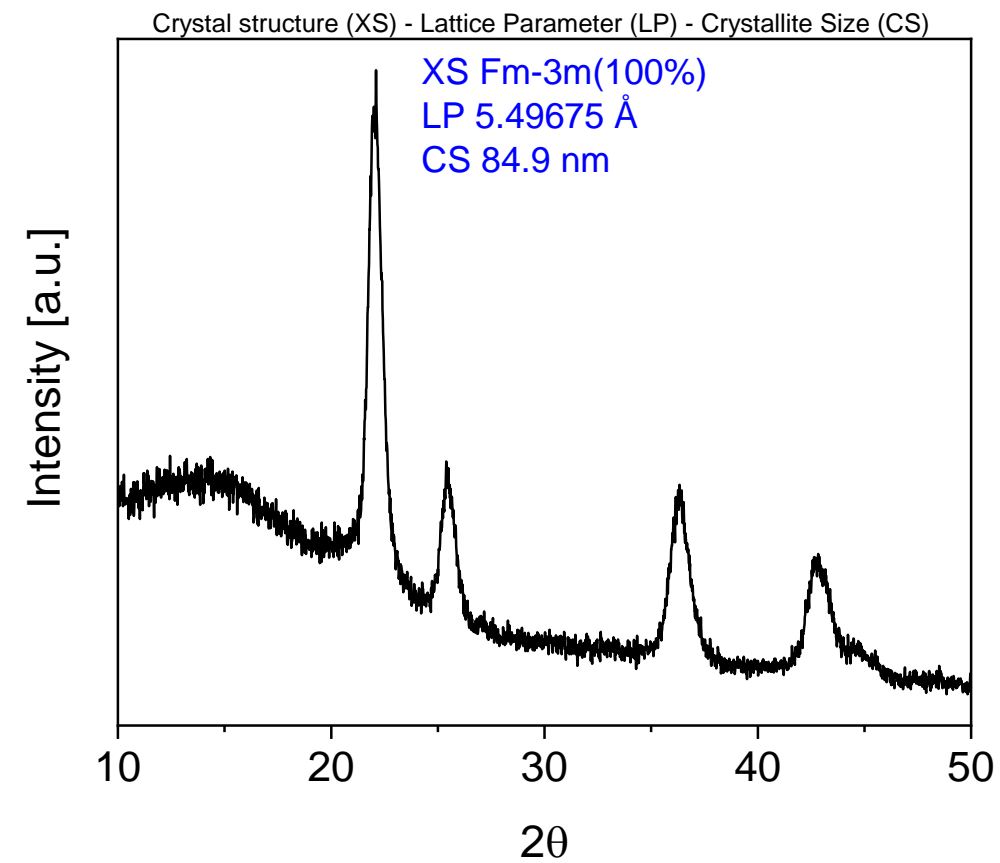
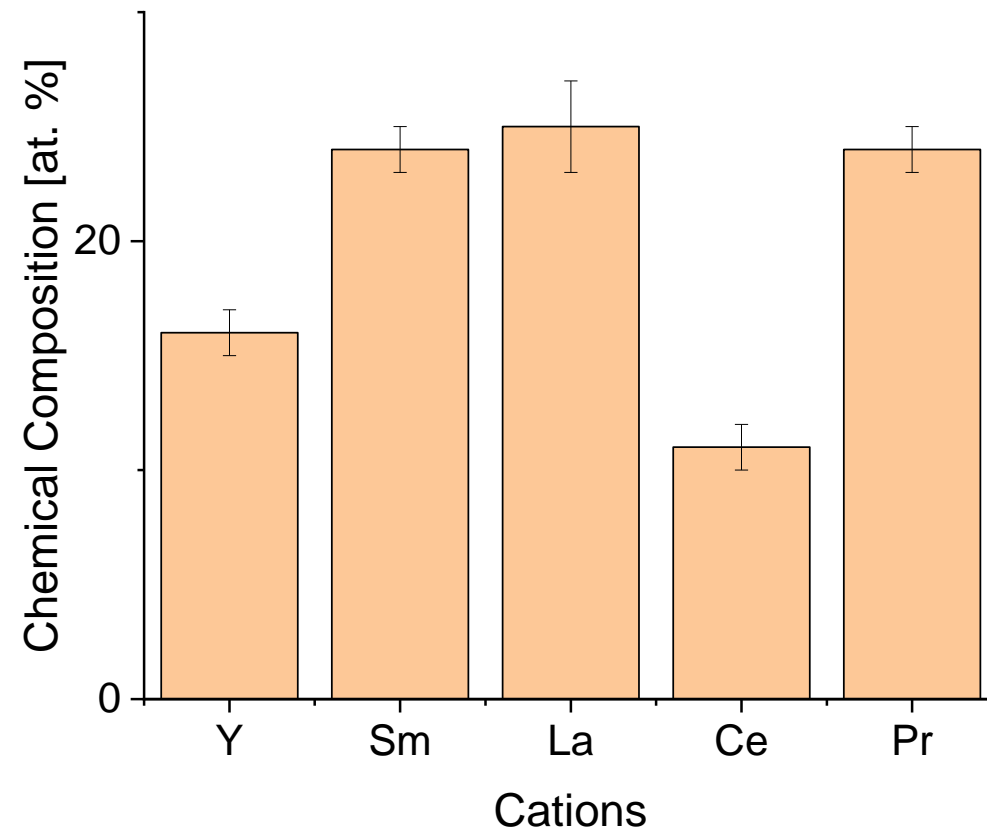
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◇ Multiple Phase



# Sample 49

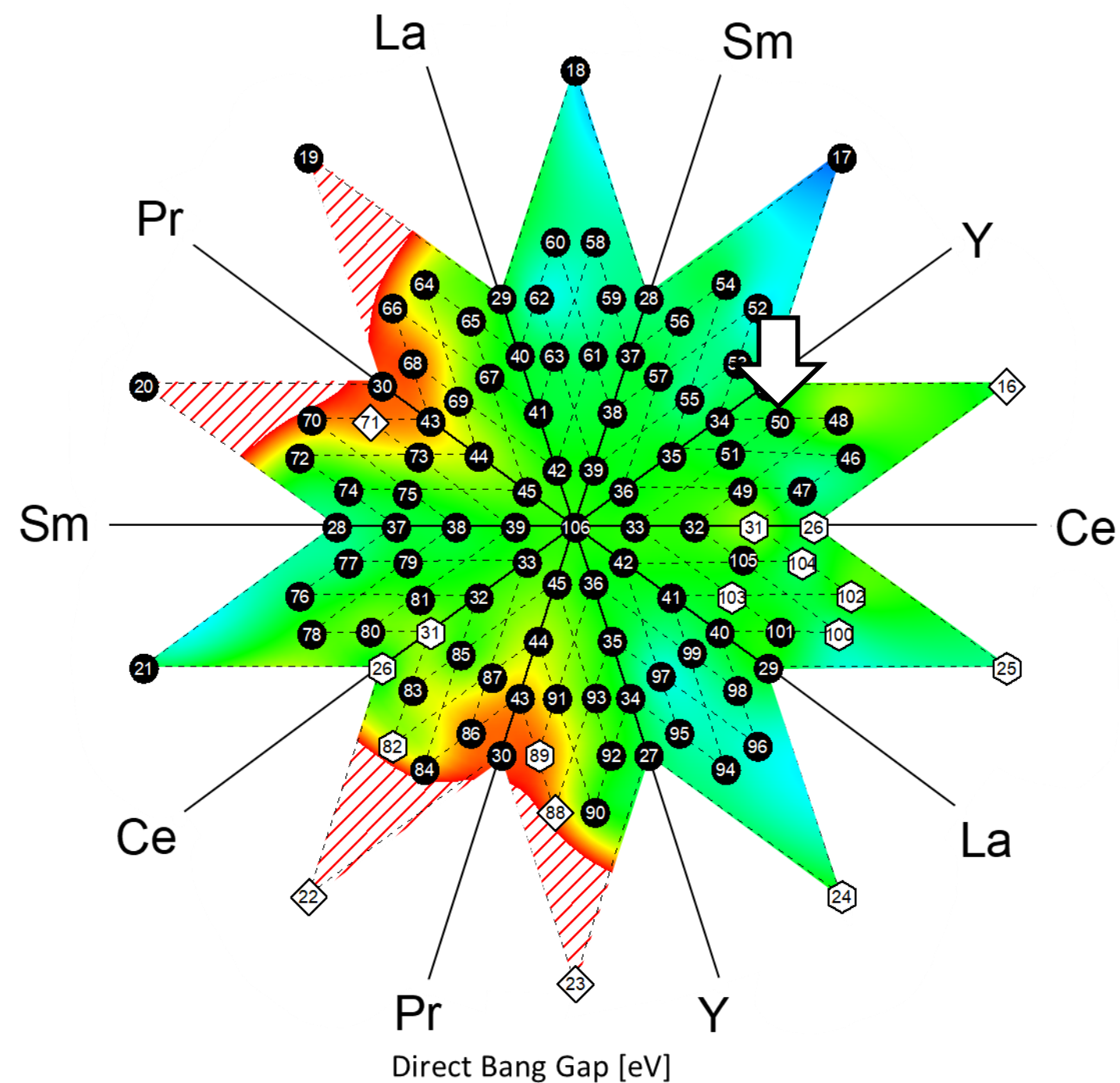


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

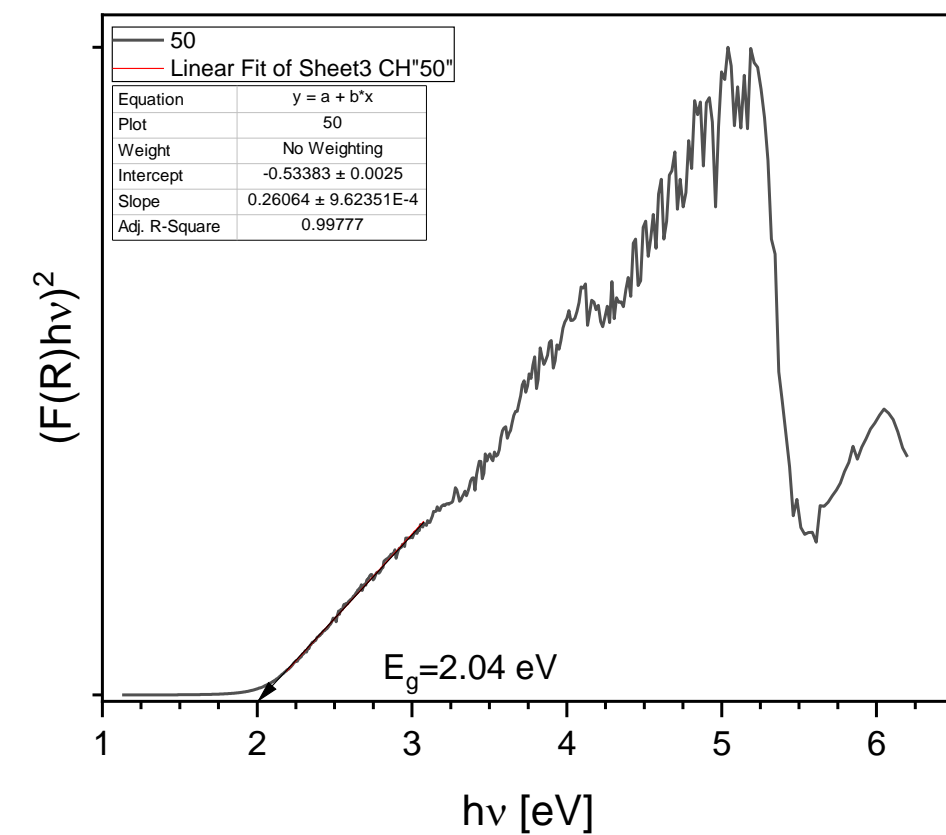
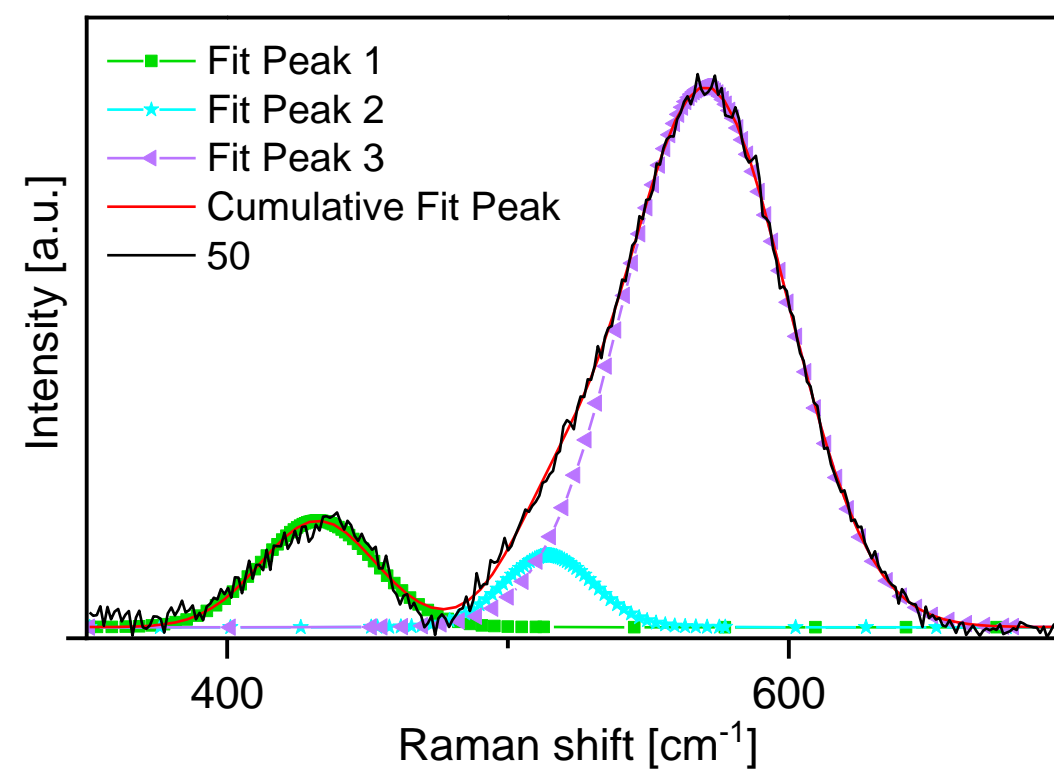
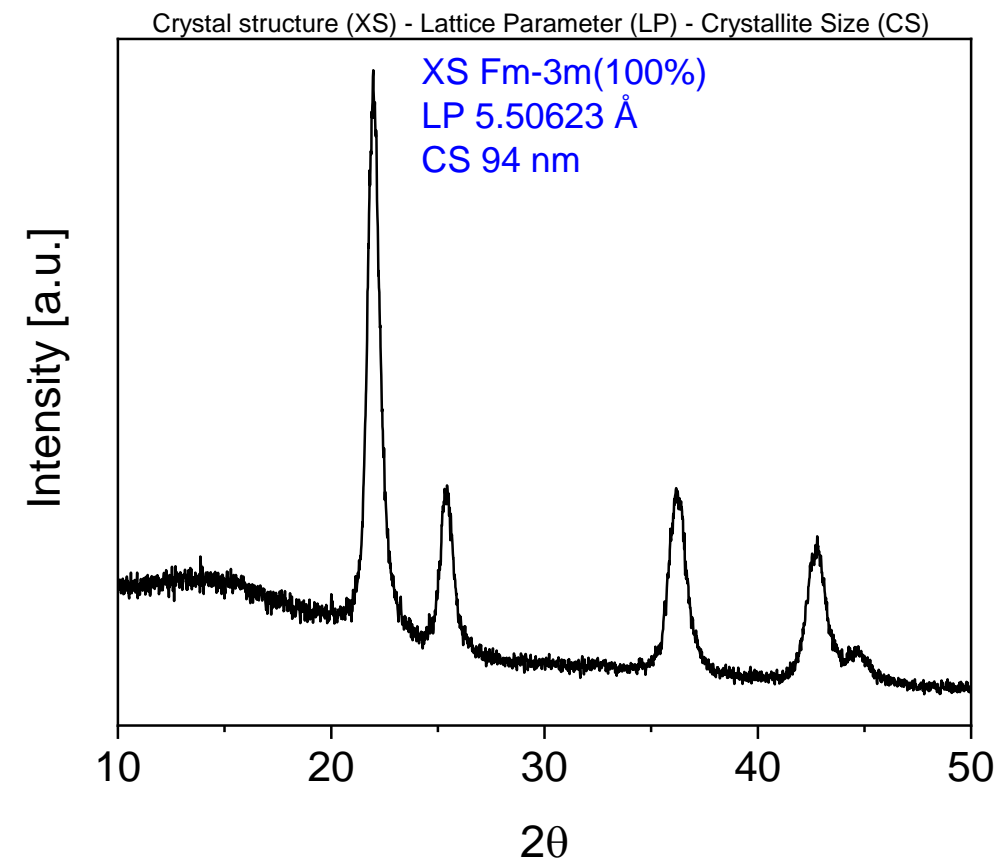
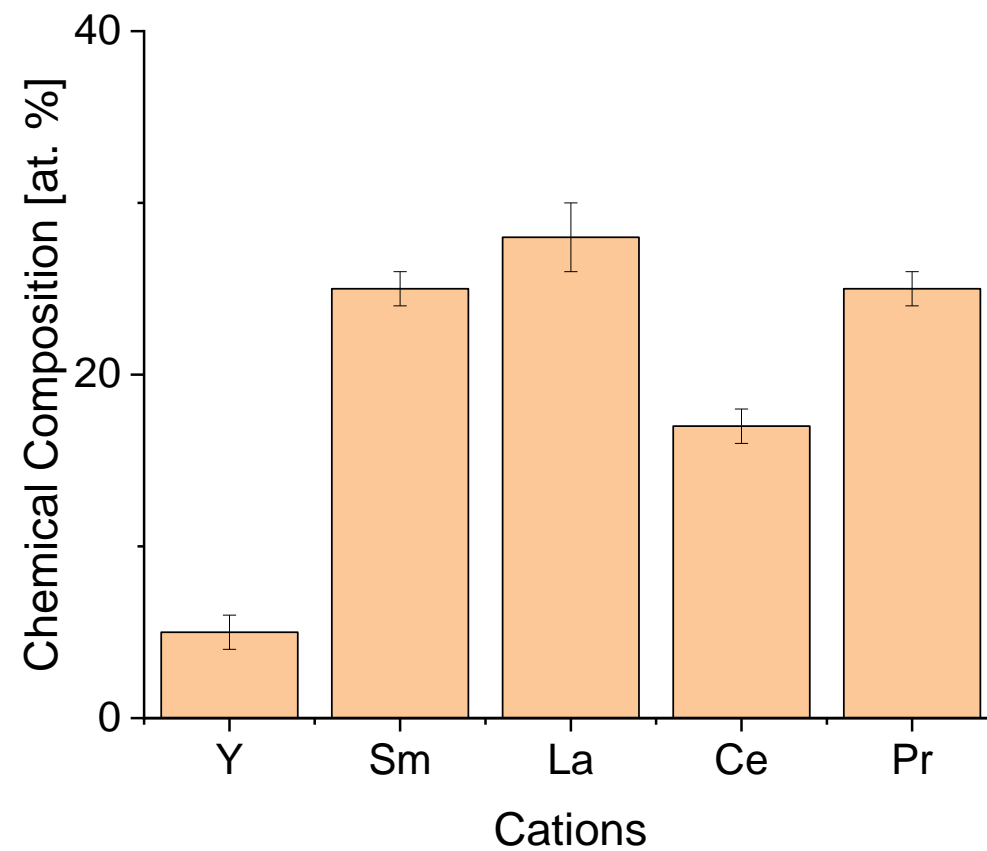




# Sample 50

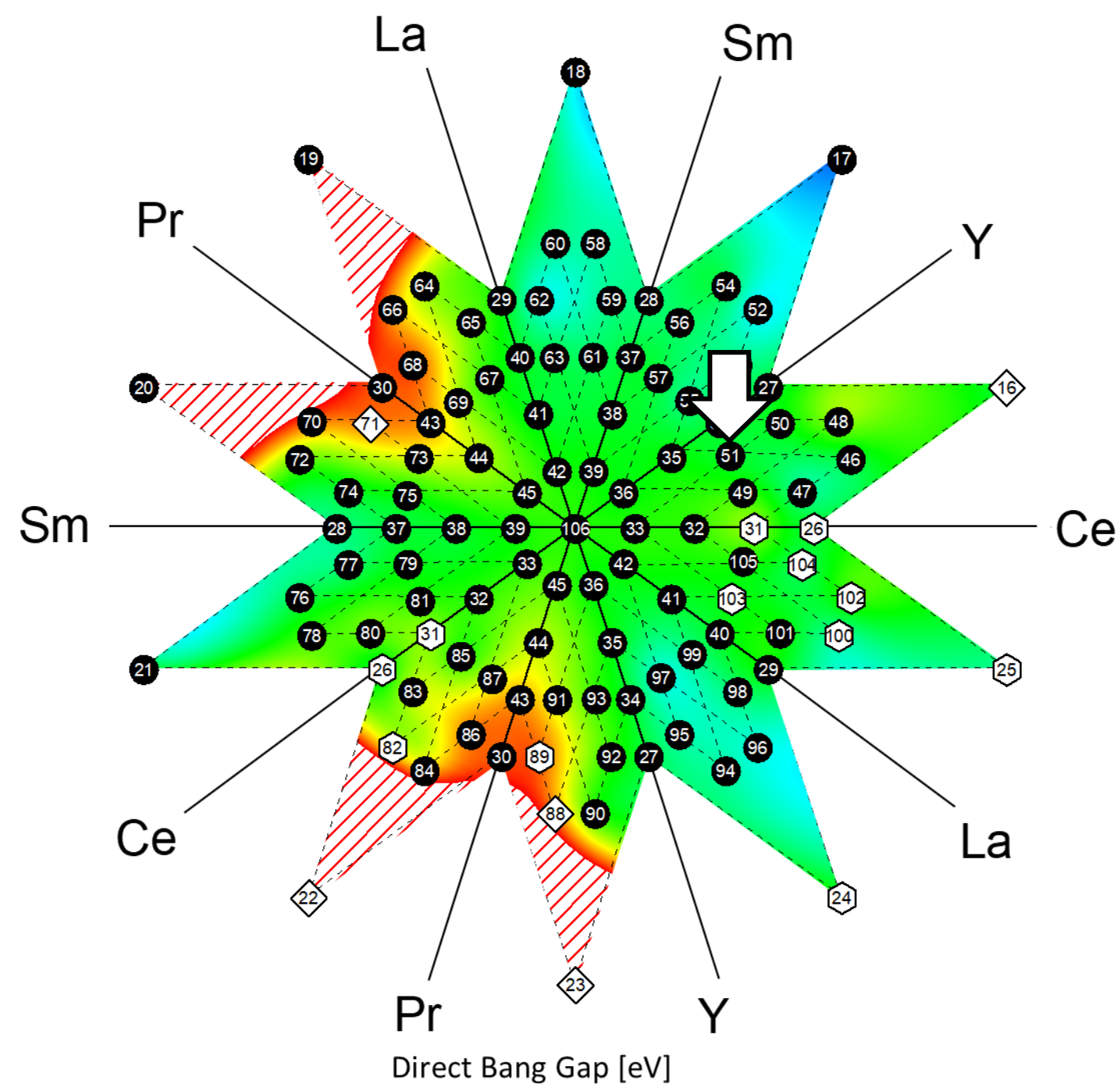


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

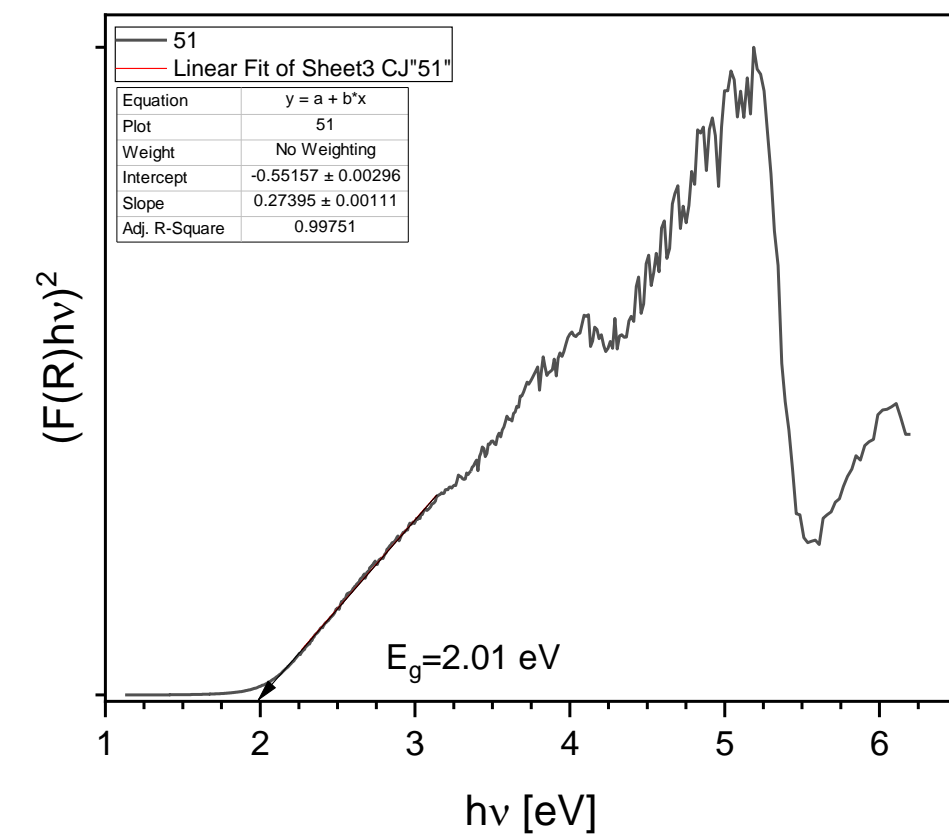
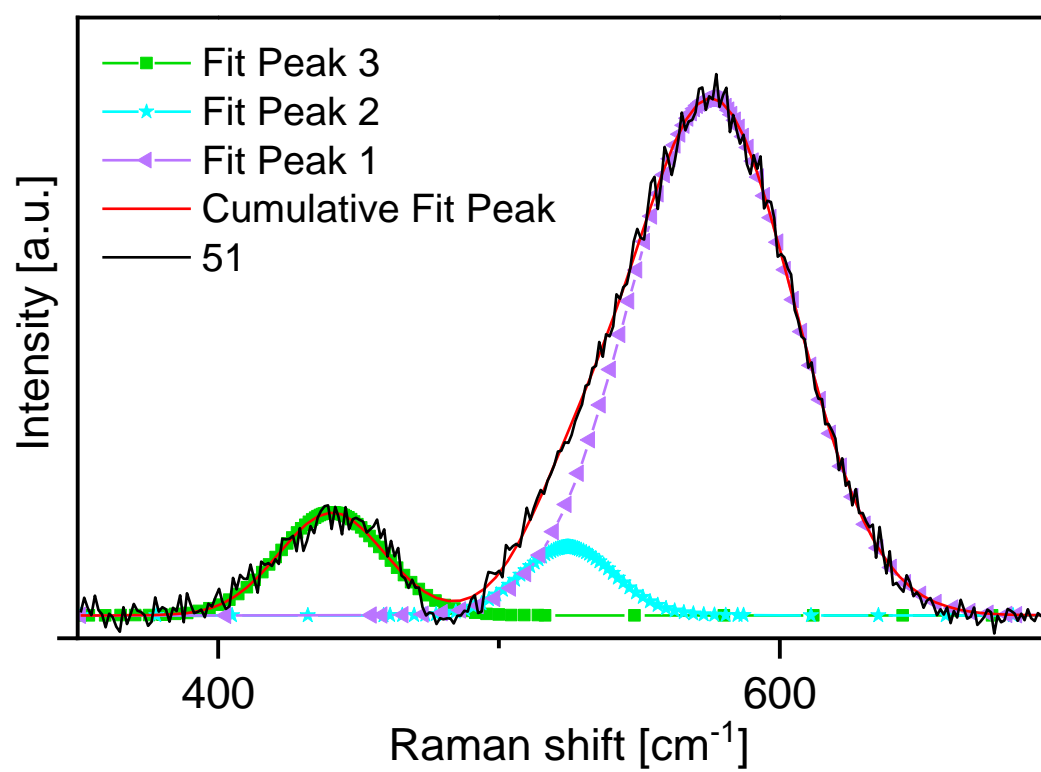
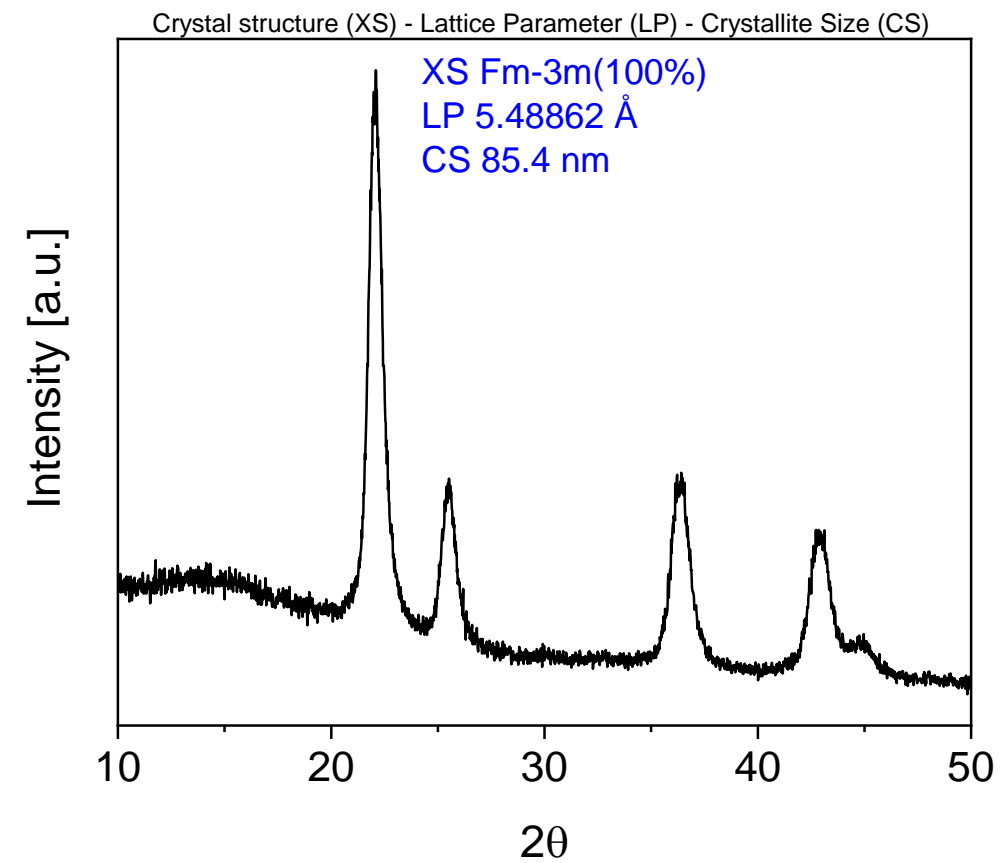
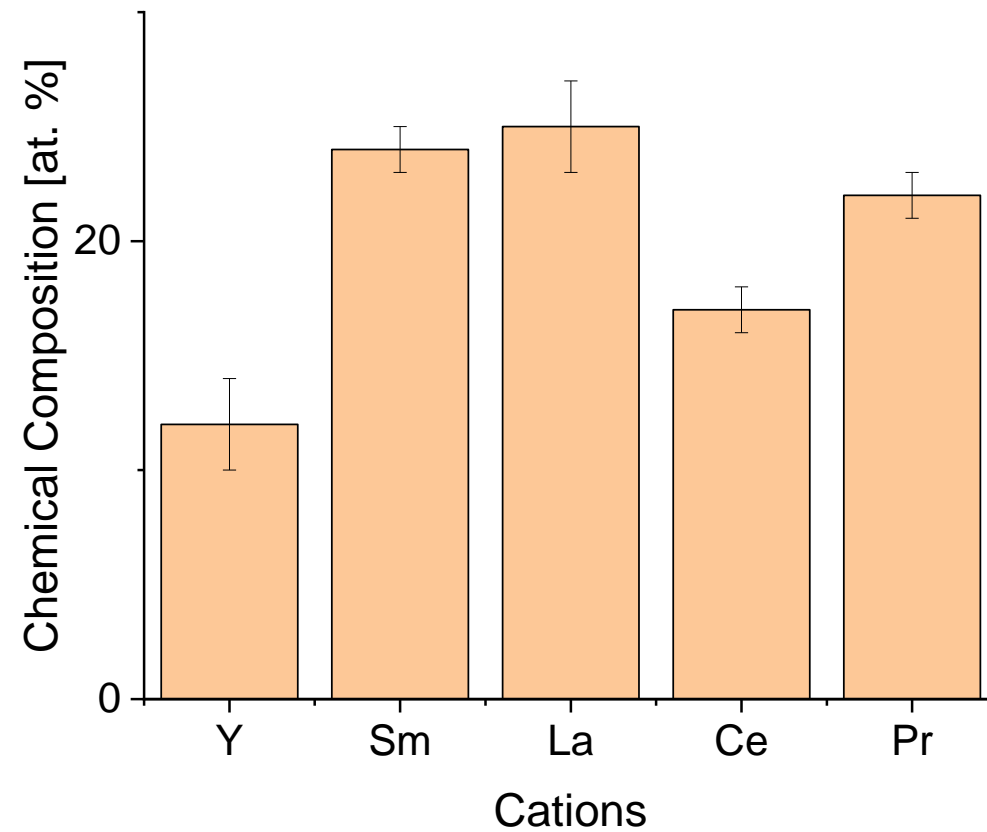




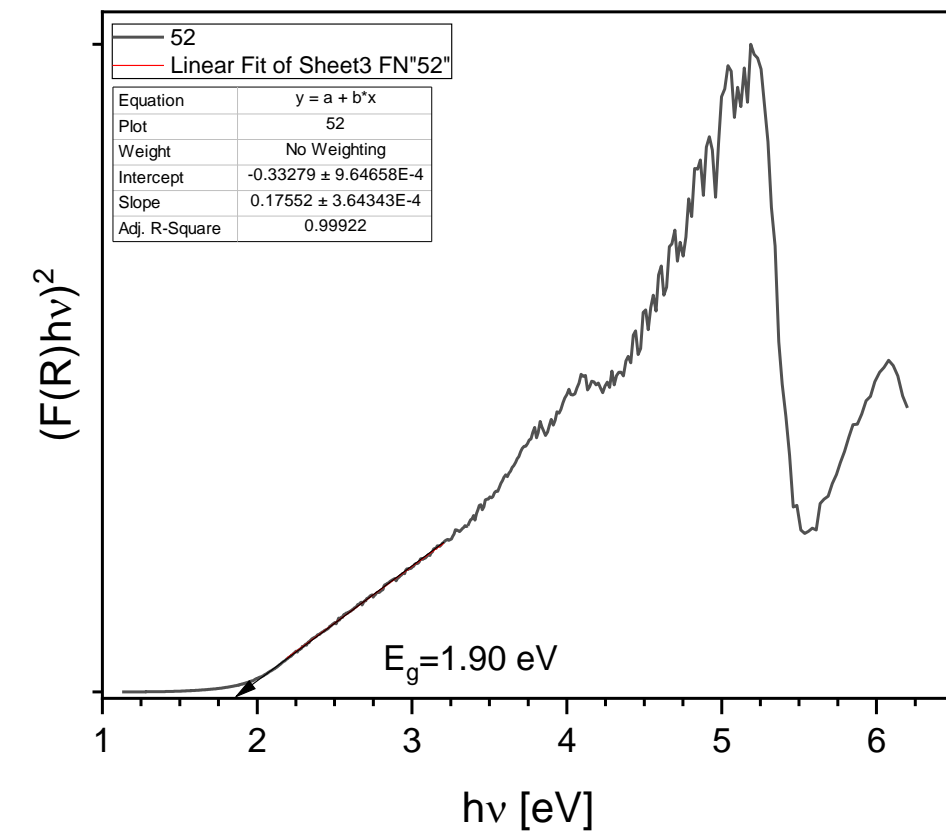
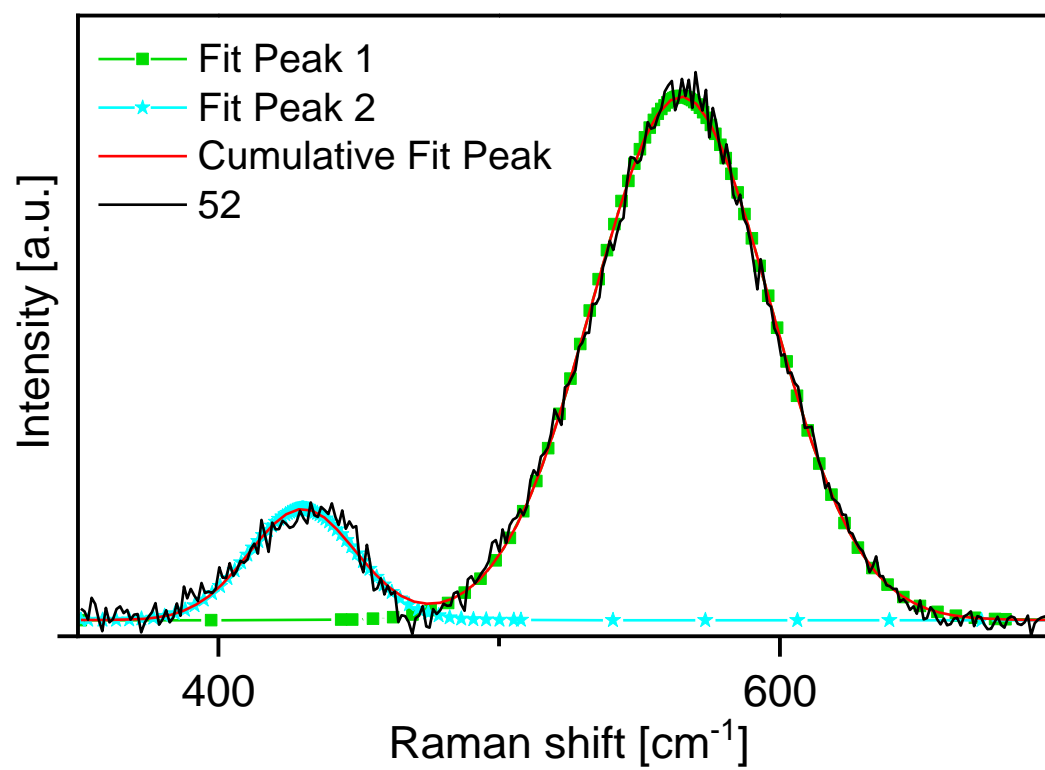
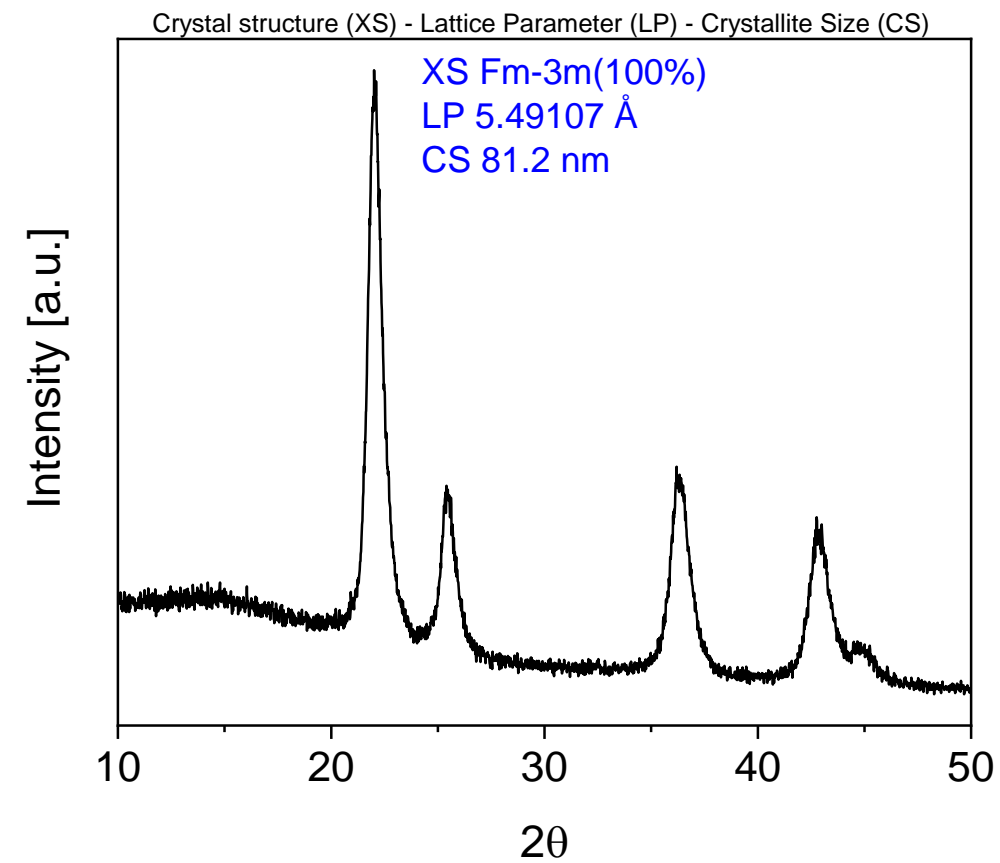
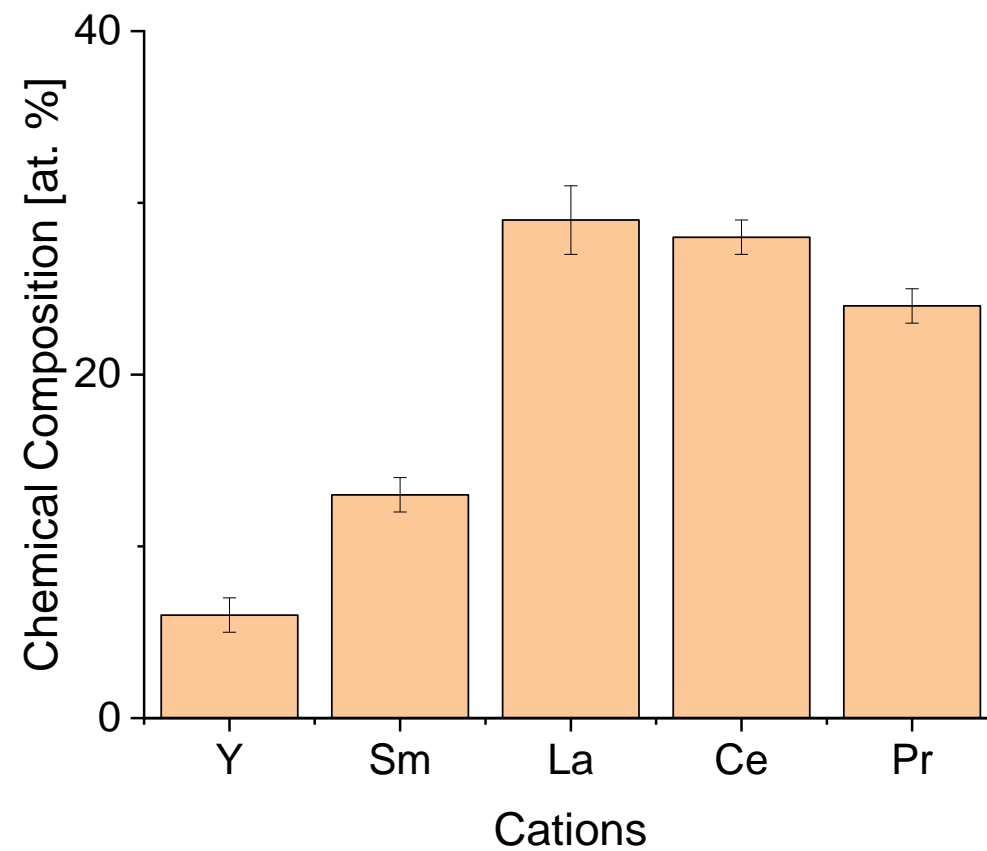
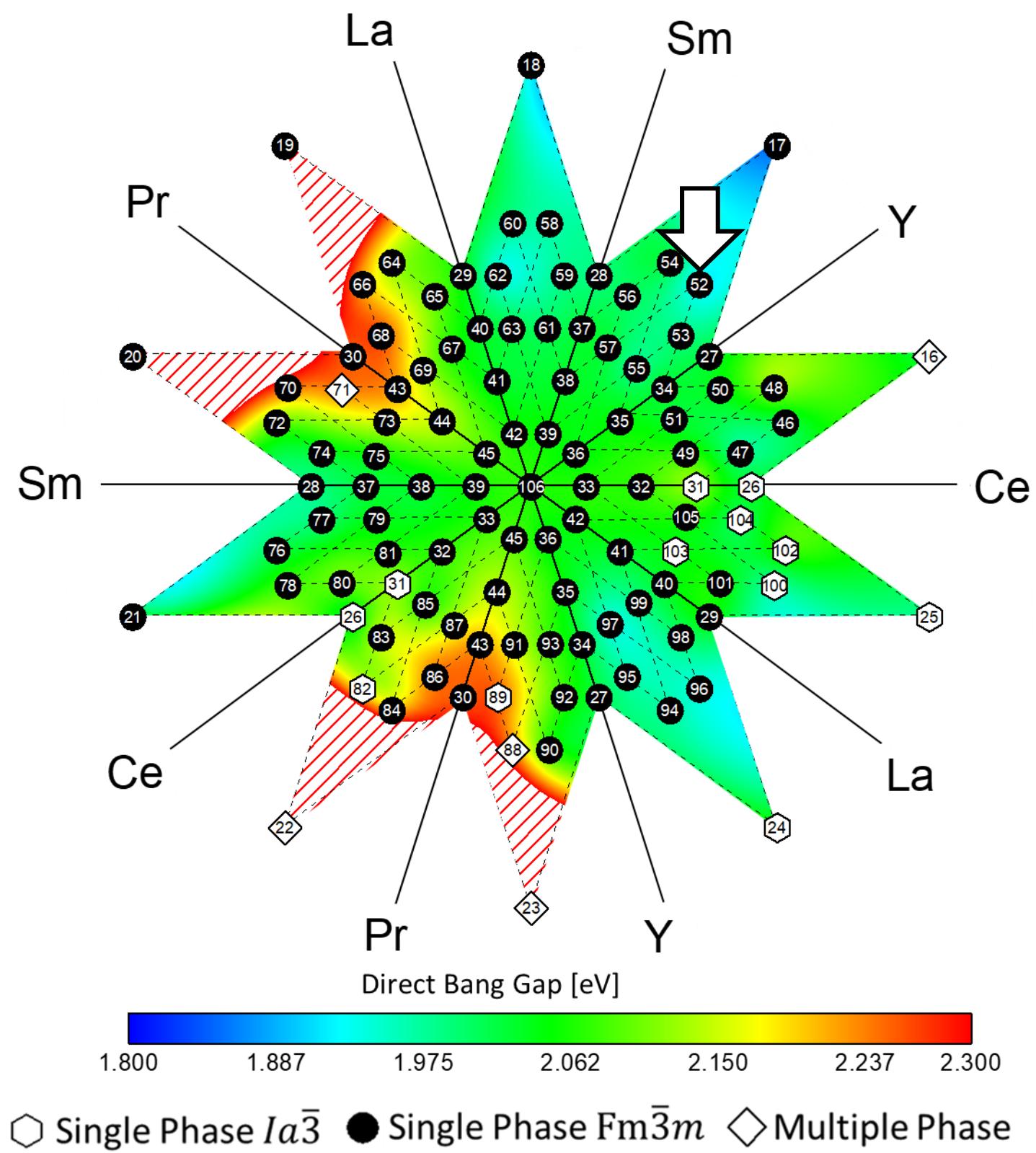
# Sample 51



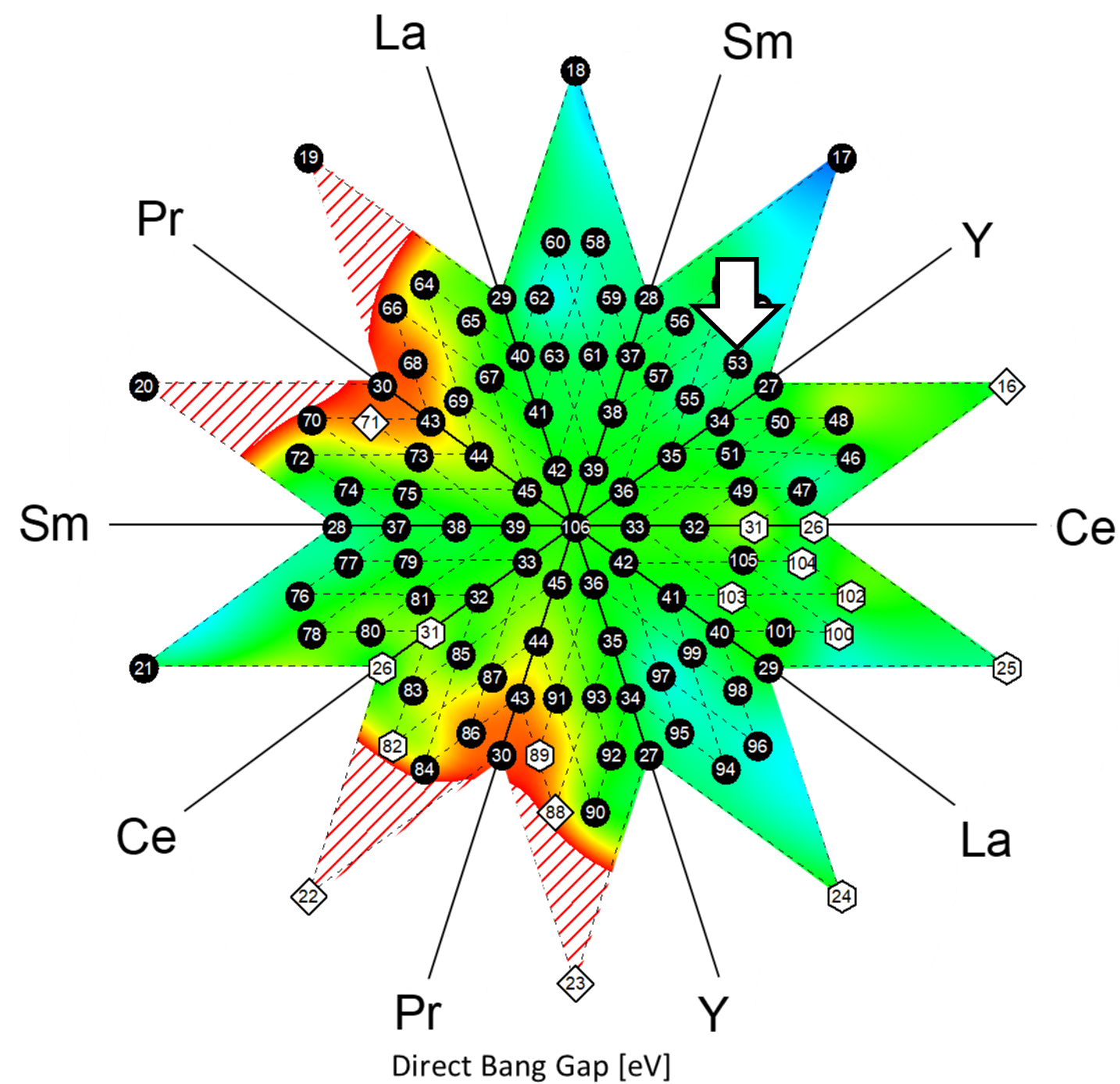
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



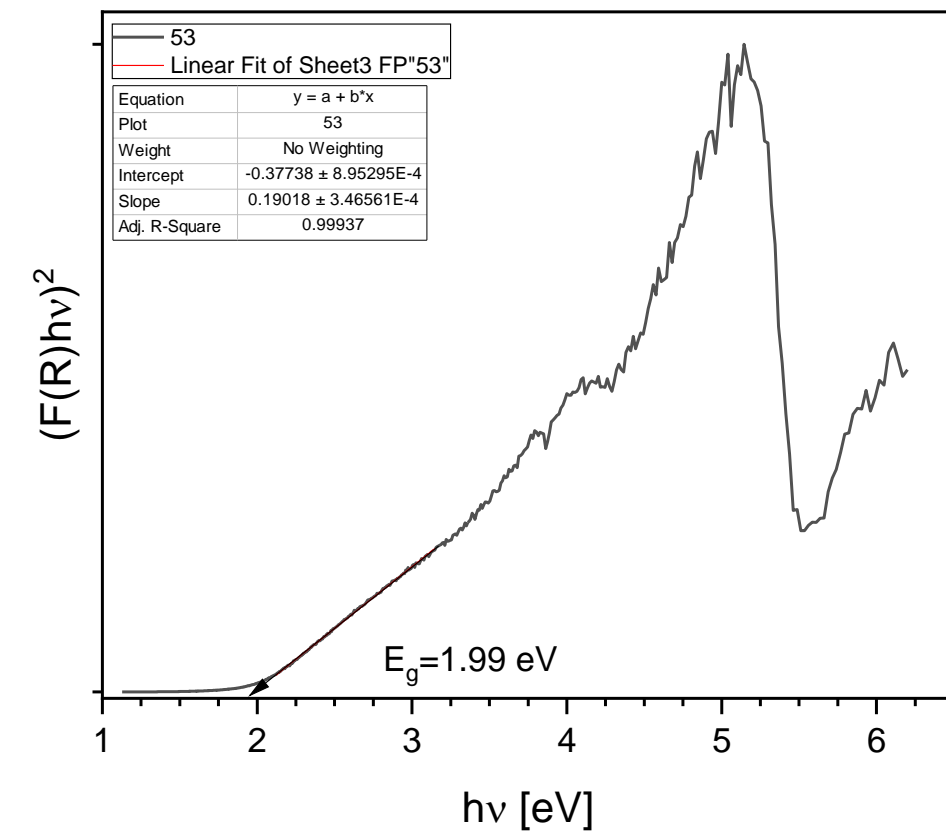
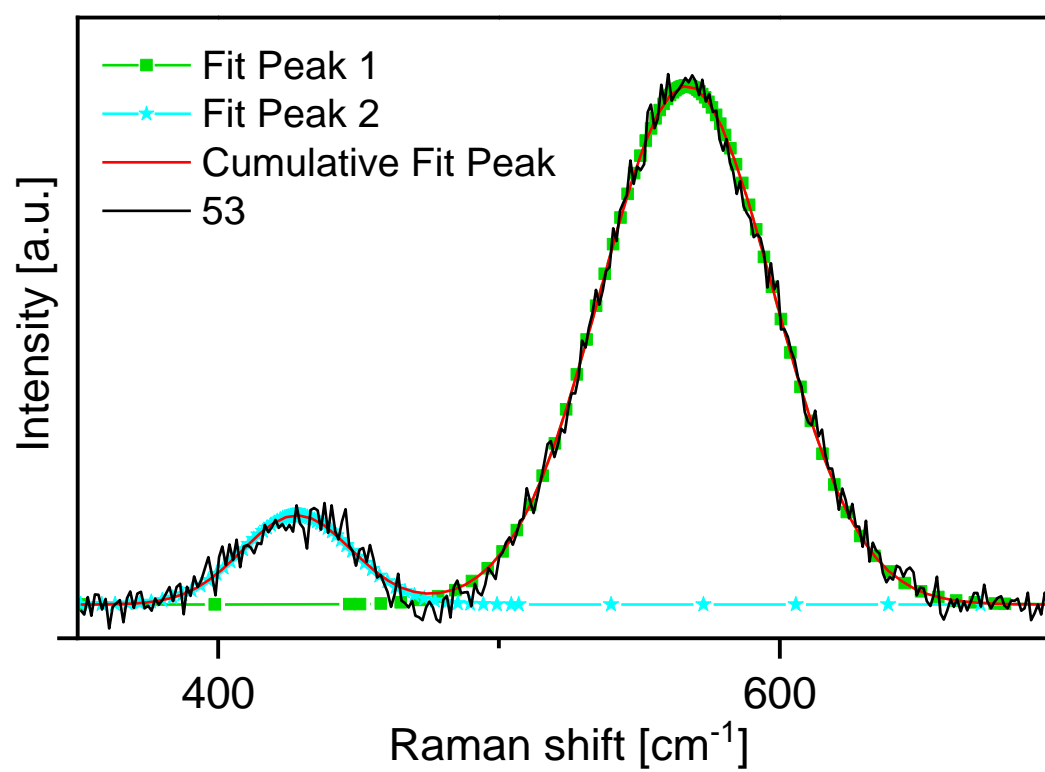
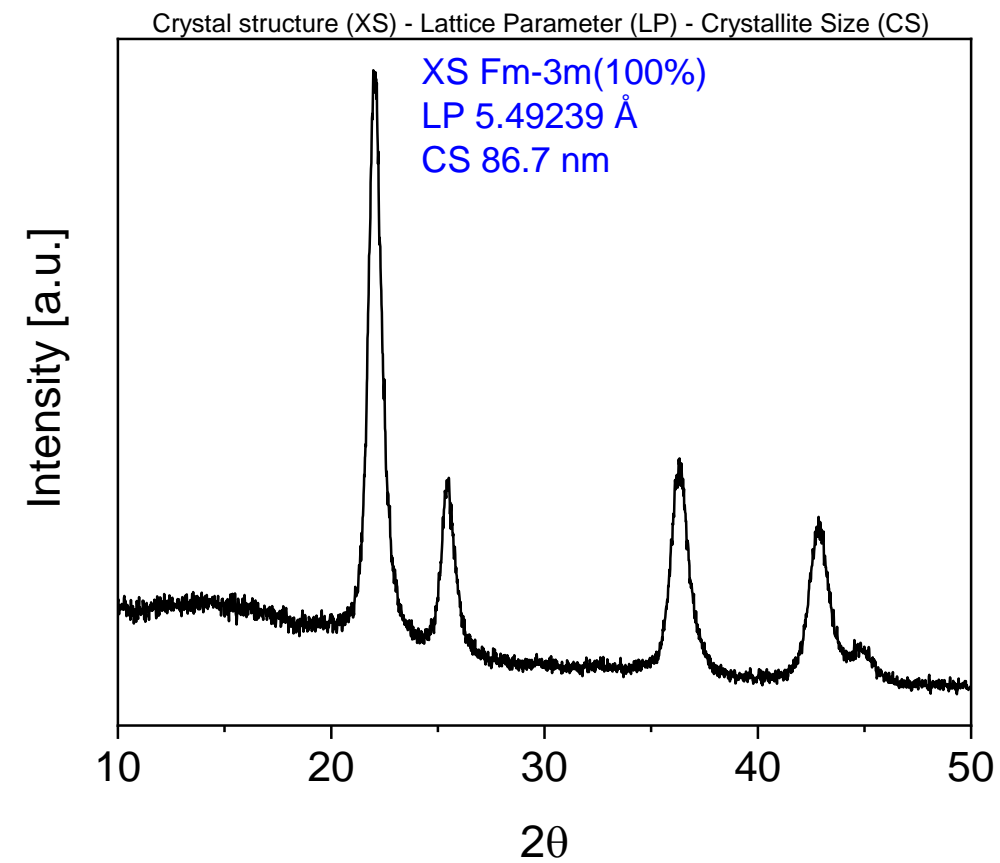
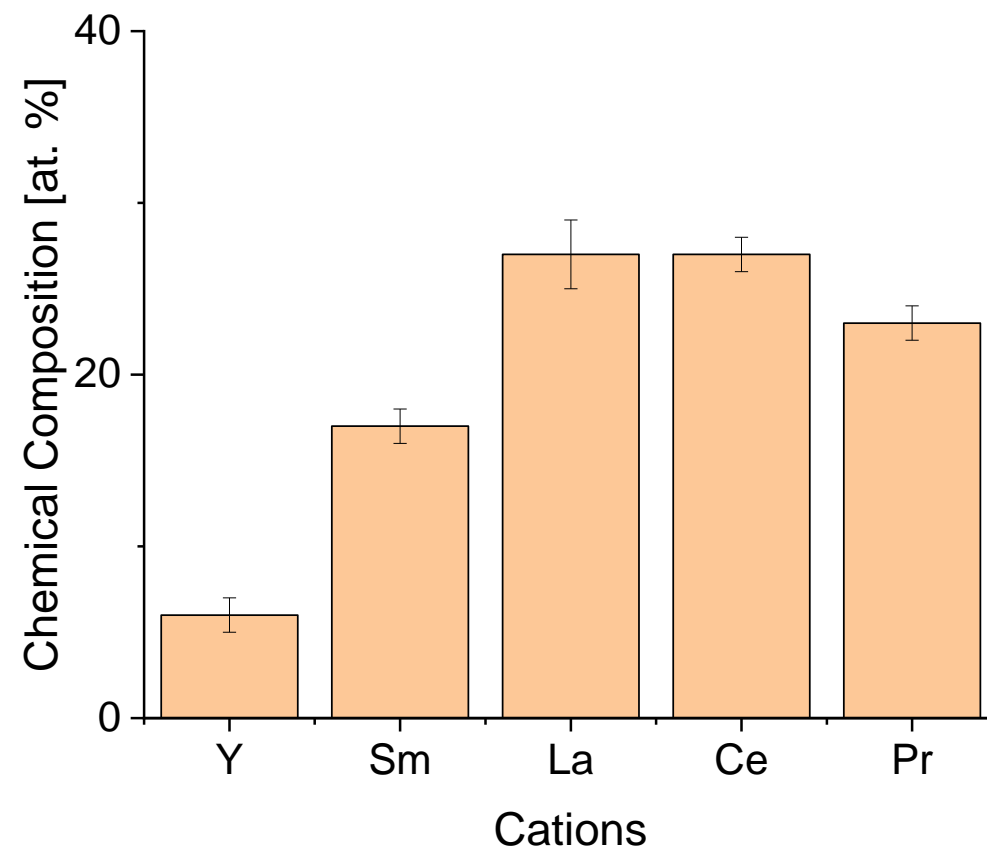
# Sample 52



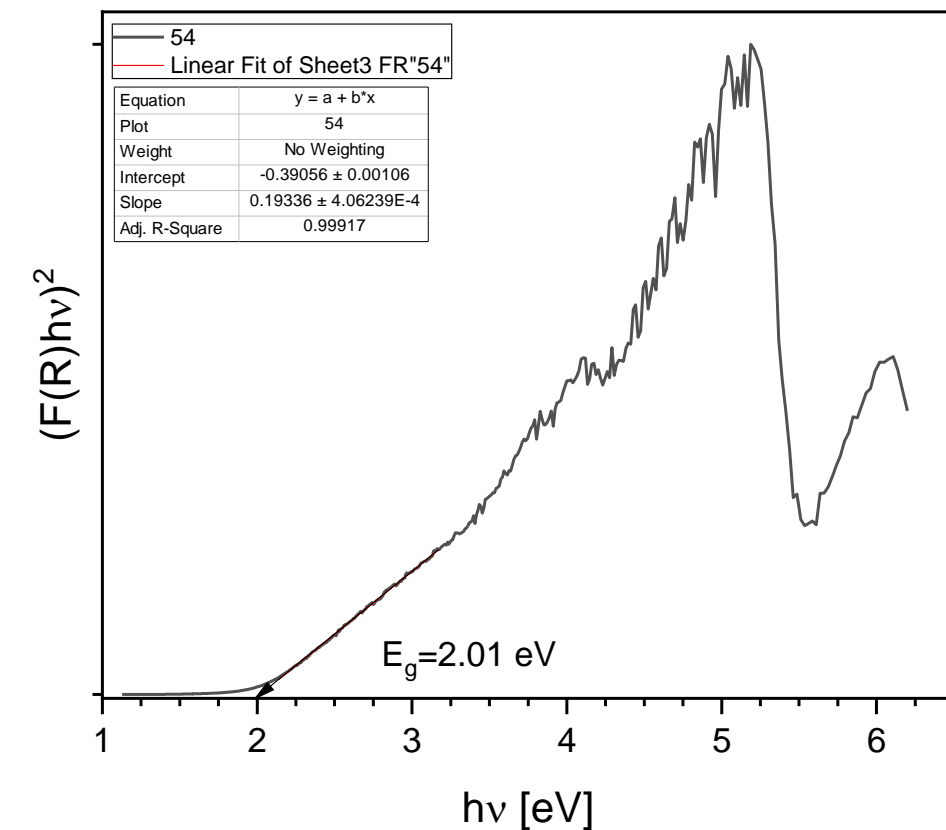
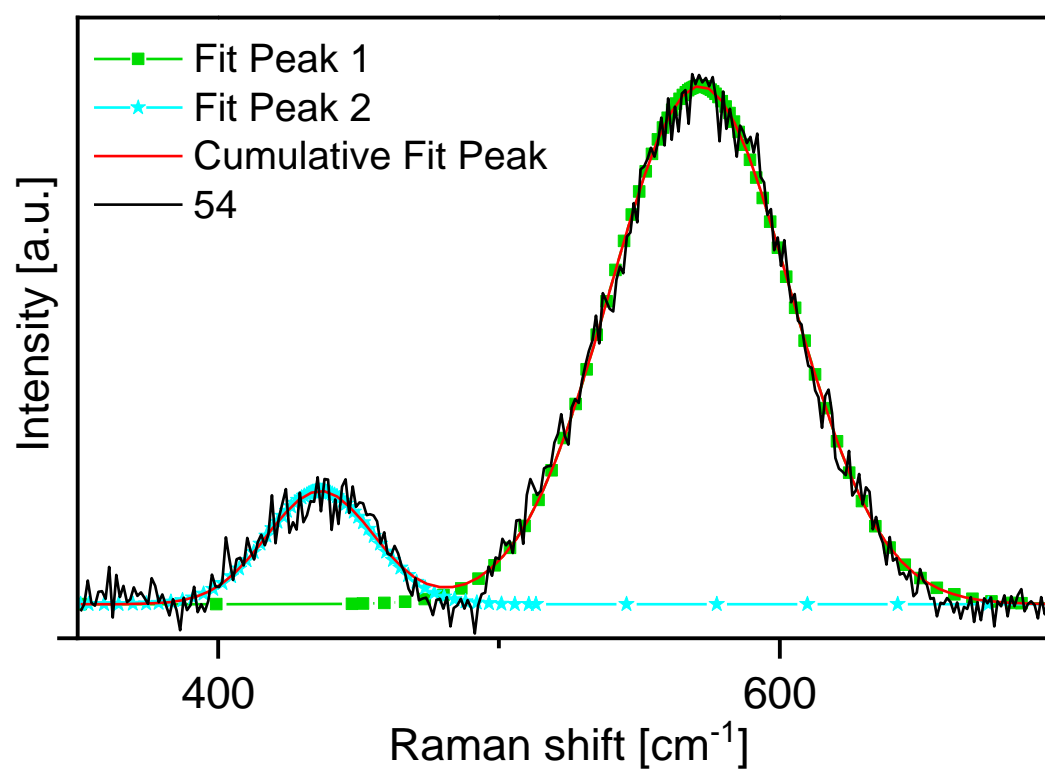
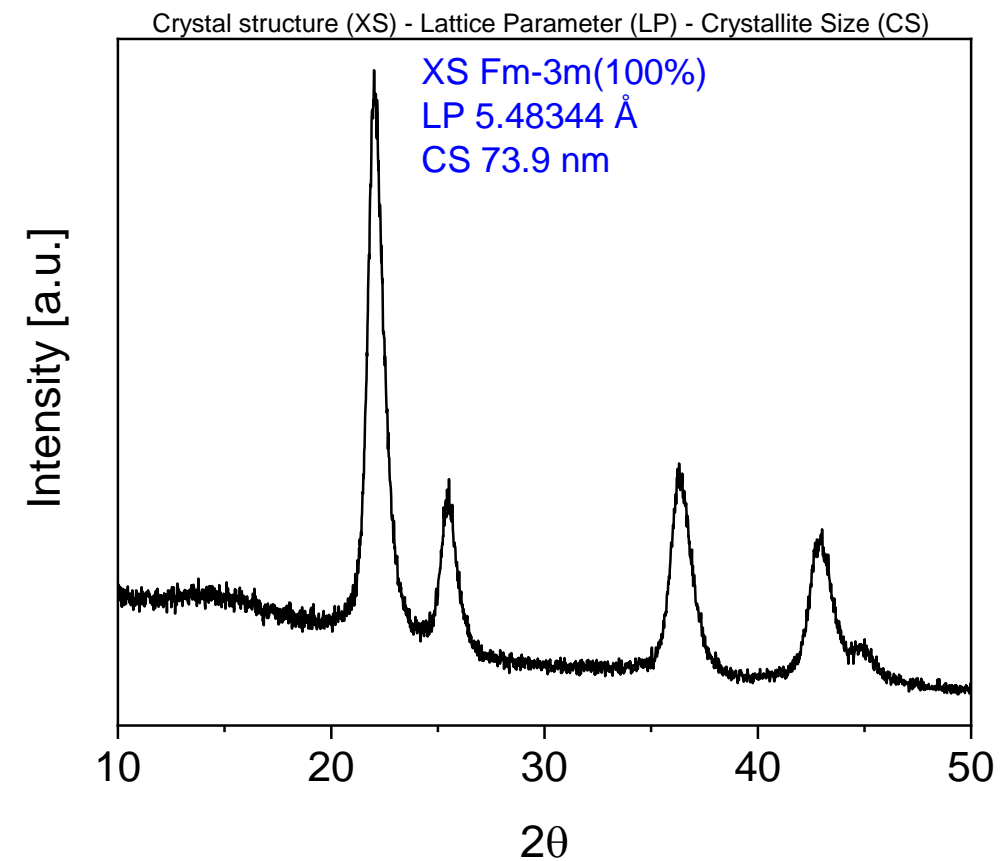
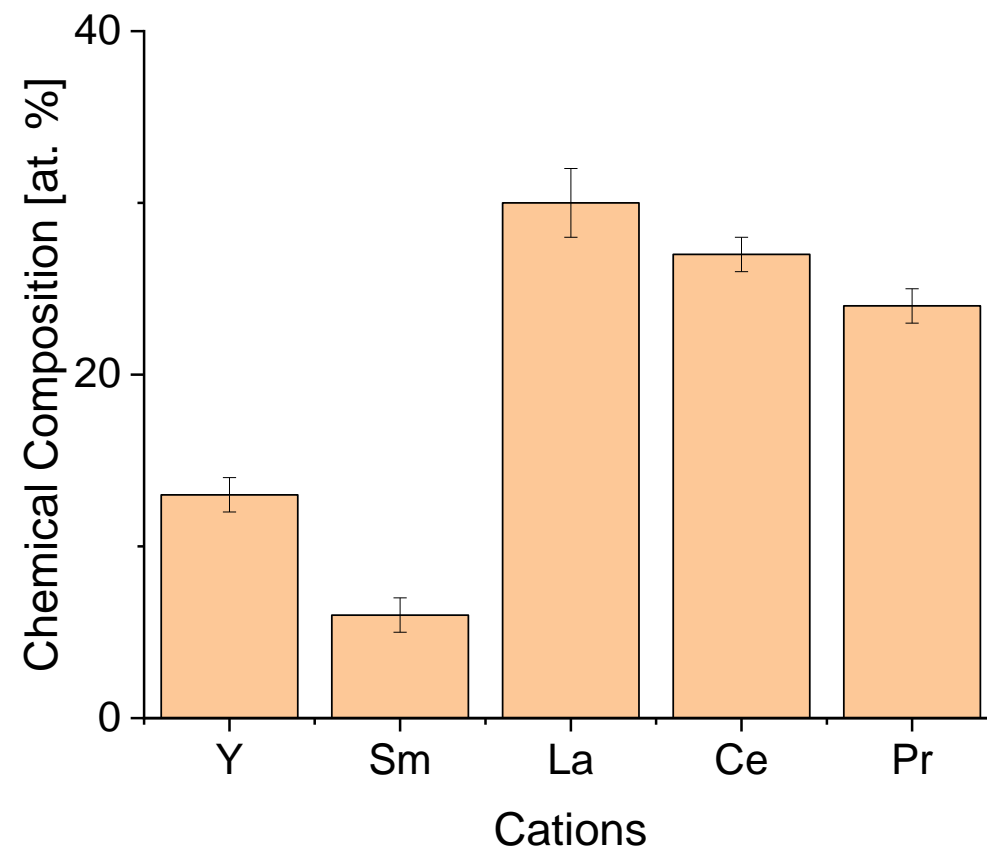
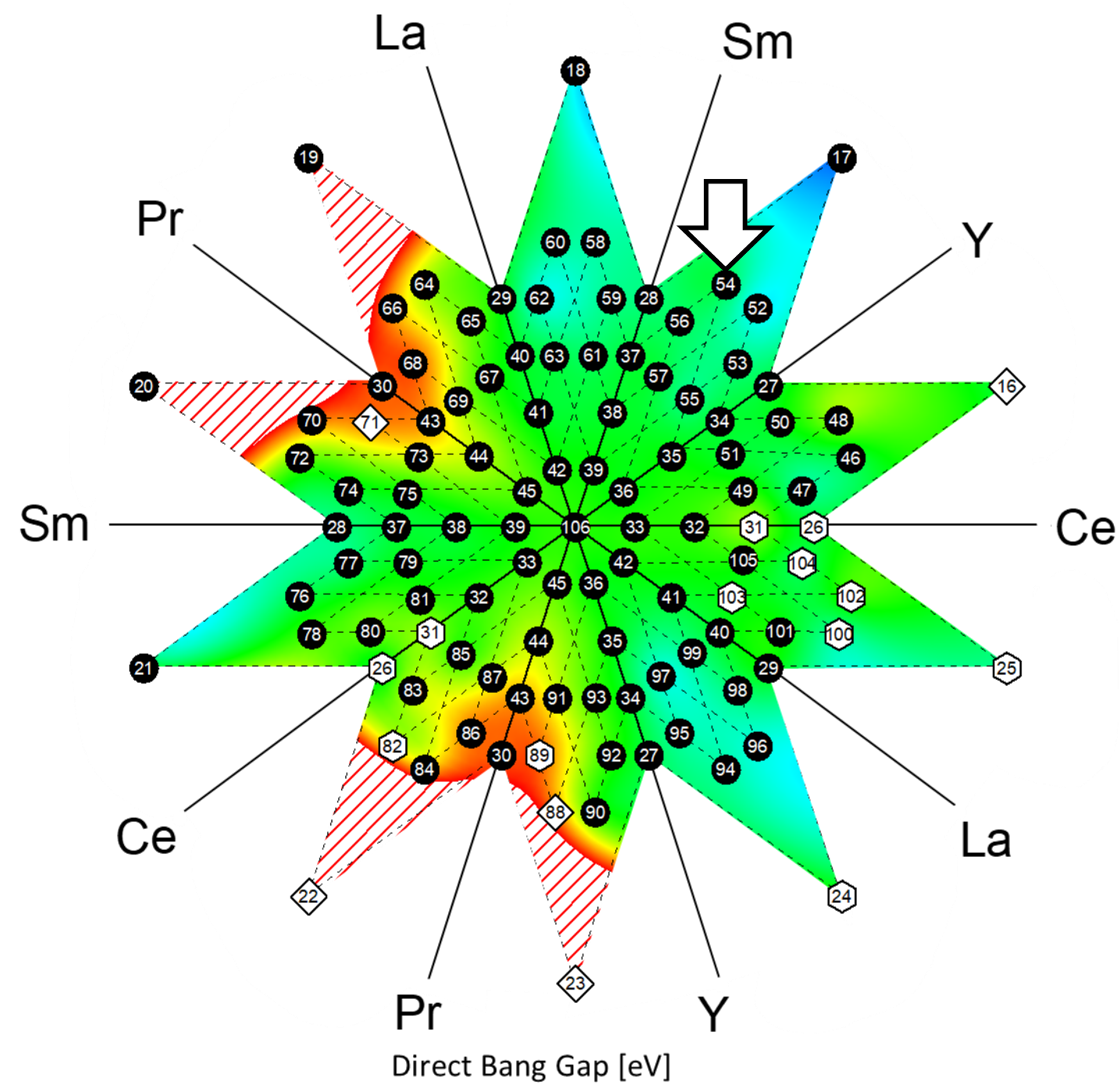
# Sample 53



◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



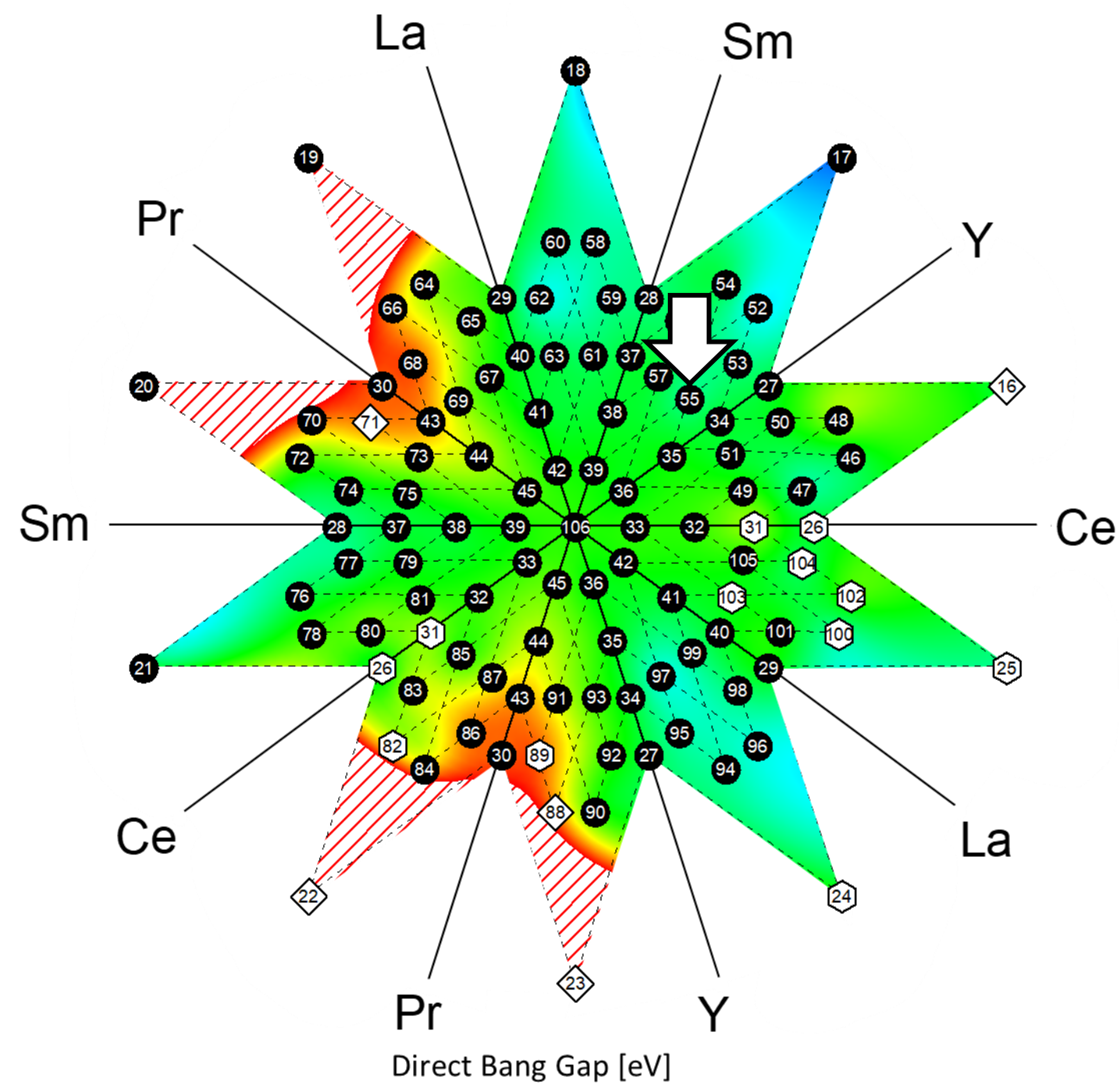
# Sample 54



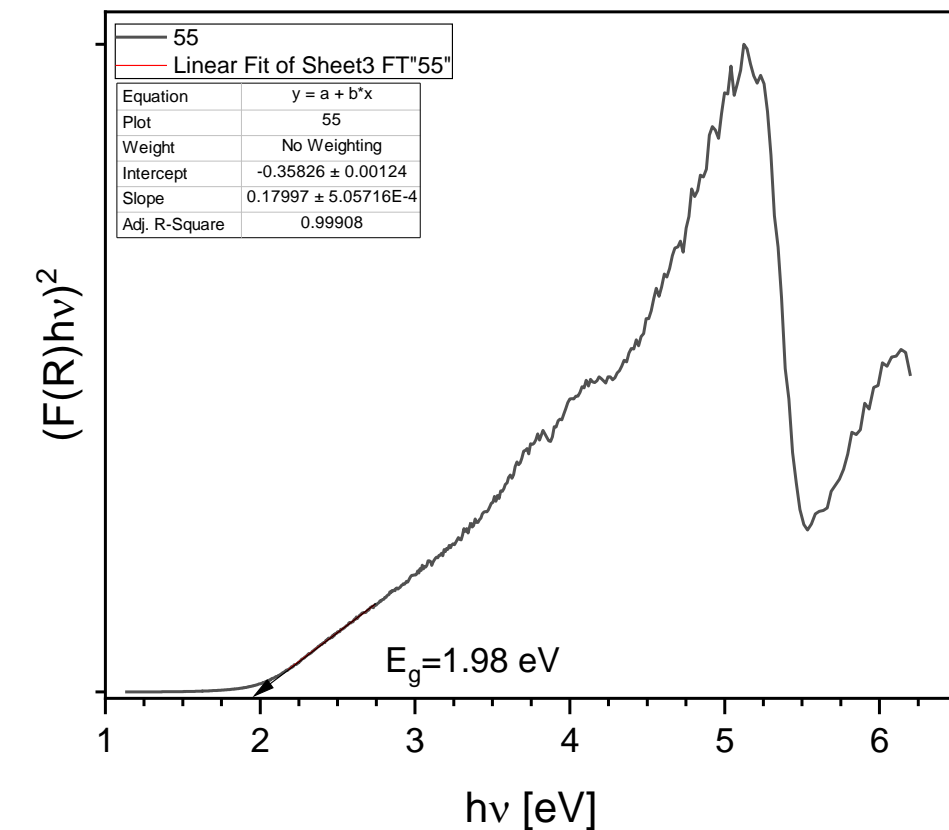
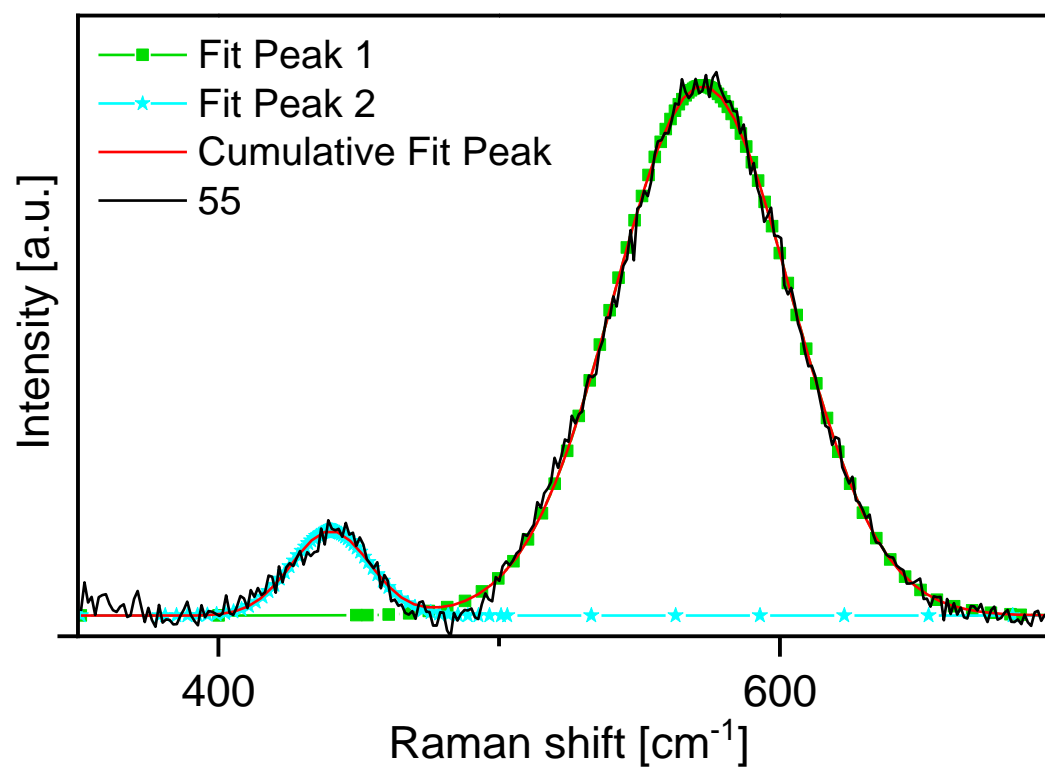
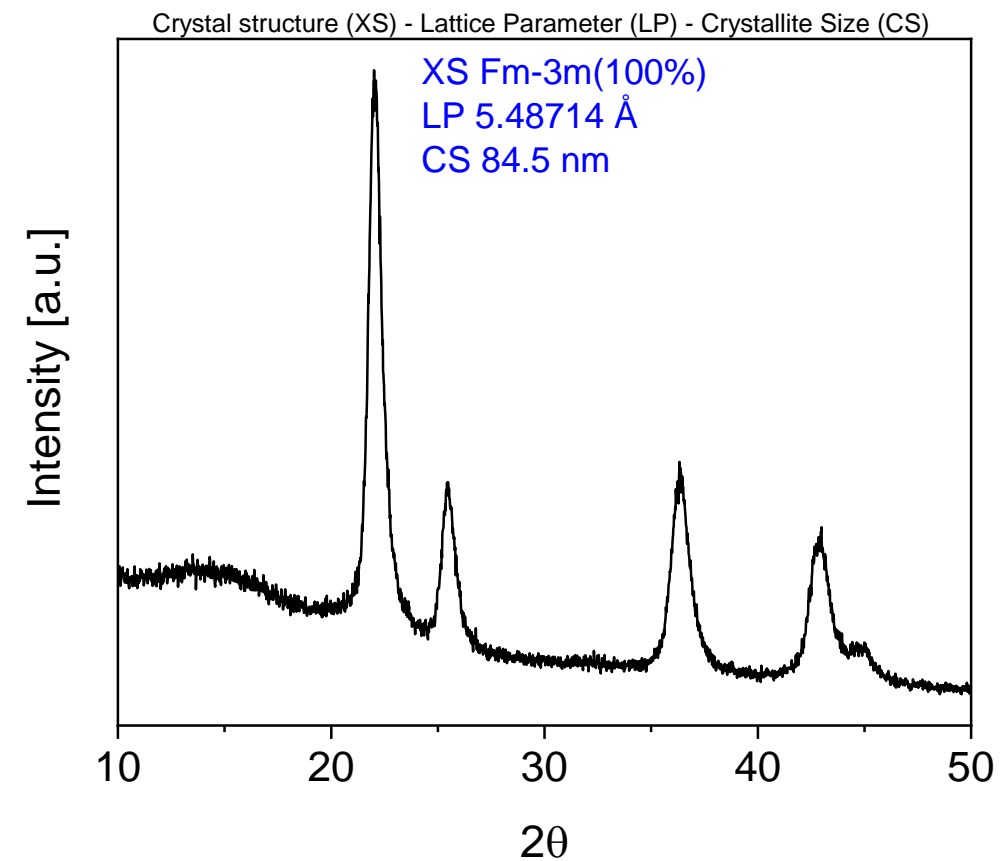
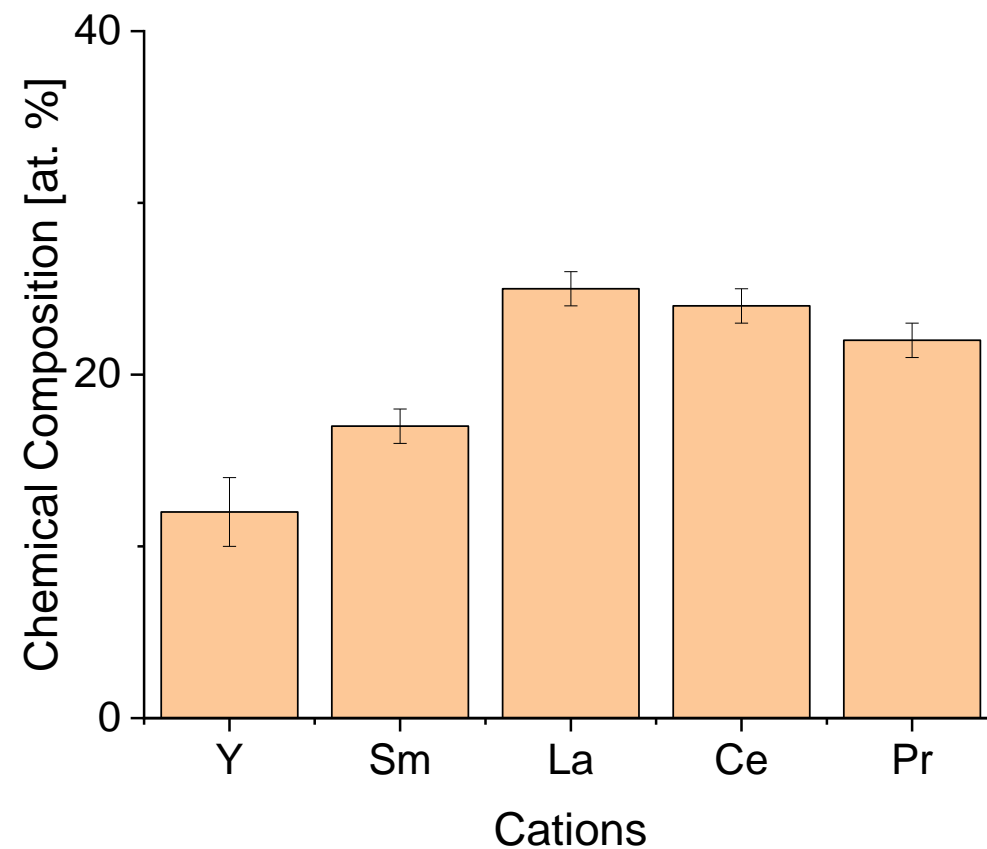
$\square$  Single Phase  $Ia\bar{3}$   $\bullet$  Single Phase  $Fm\bar{3}m$   $\diamond$  Multiple Phase



# Sample 55

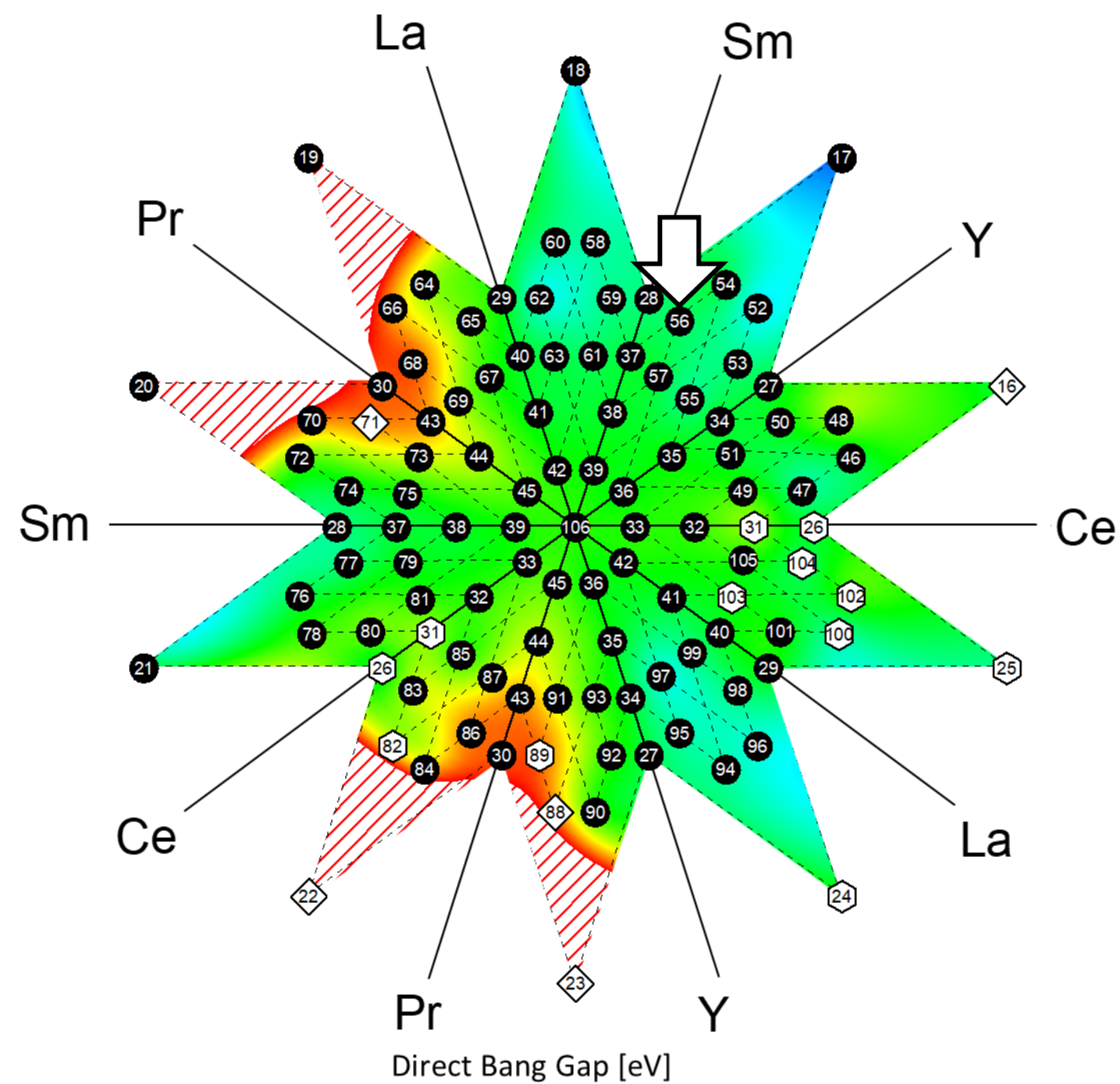


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

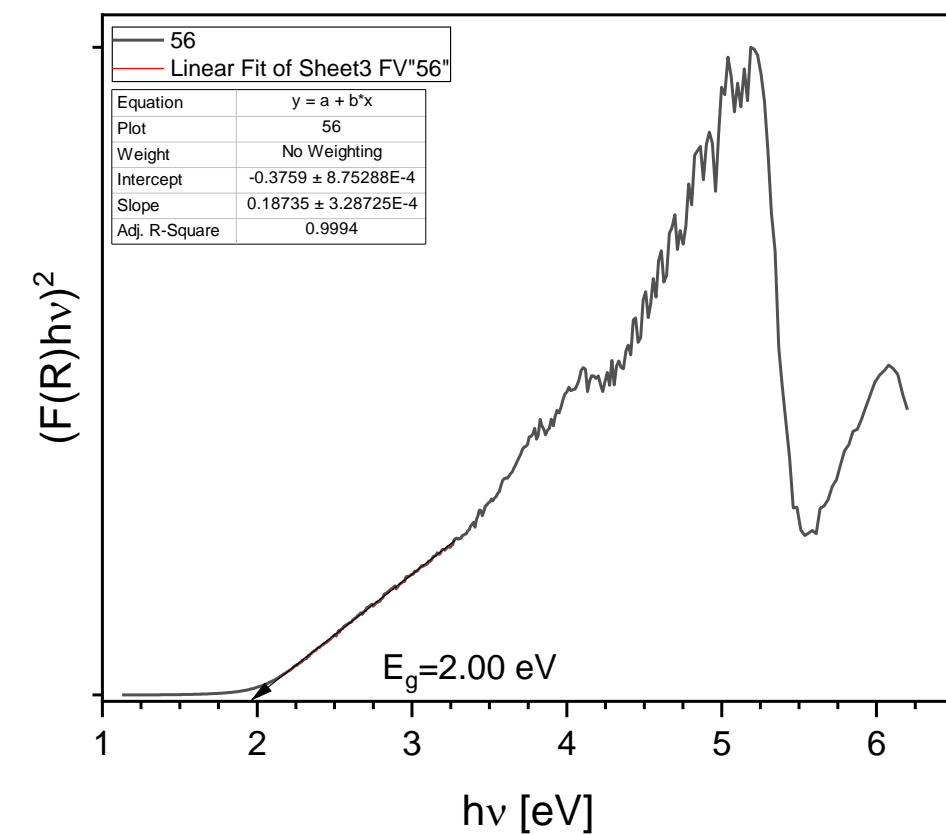
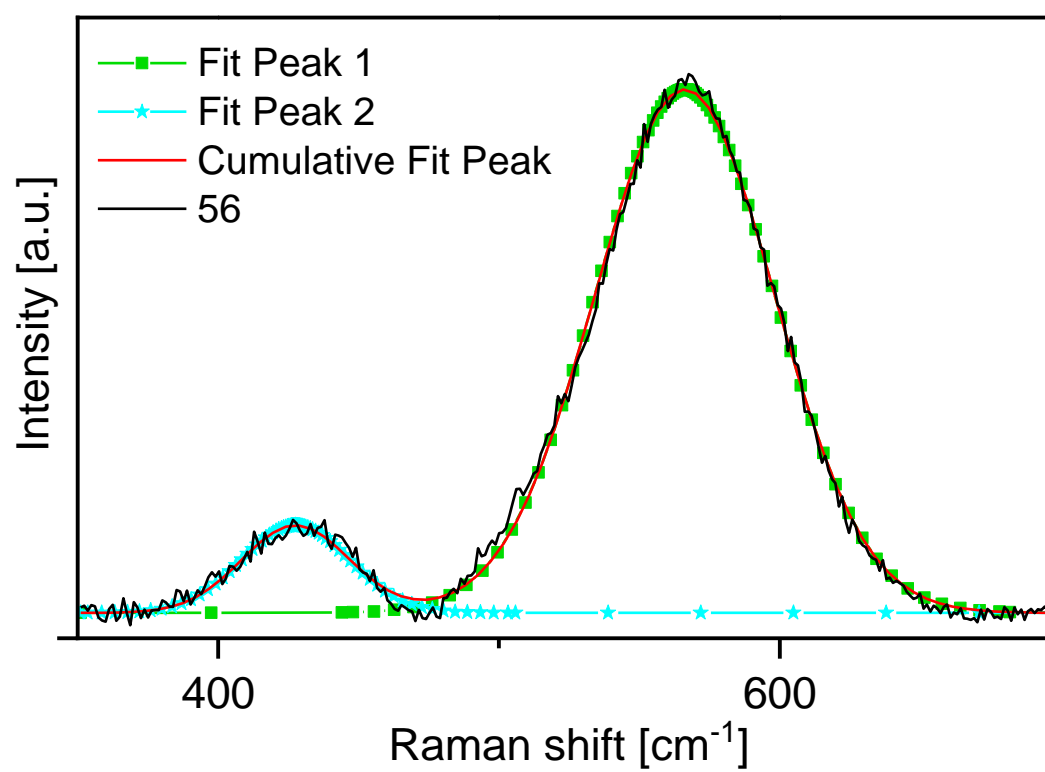
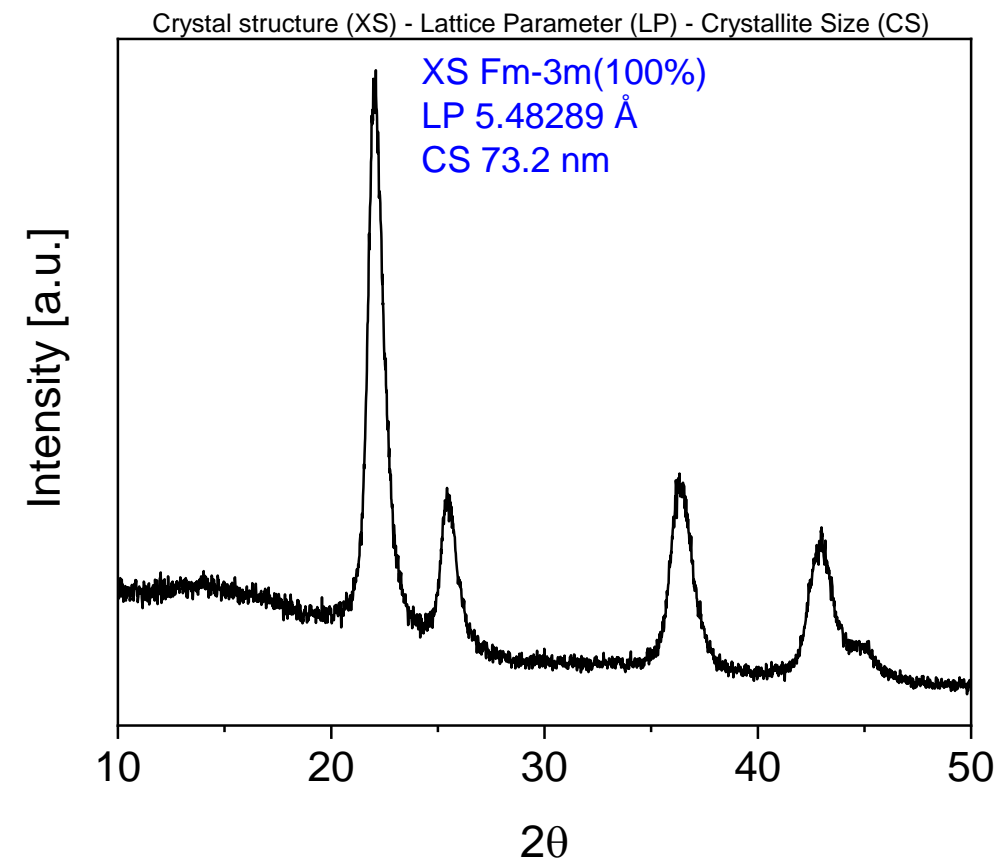
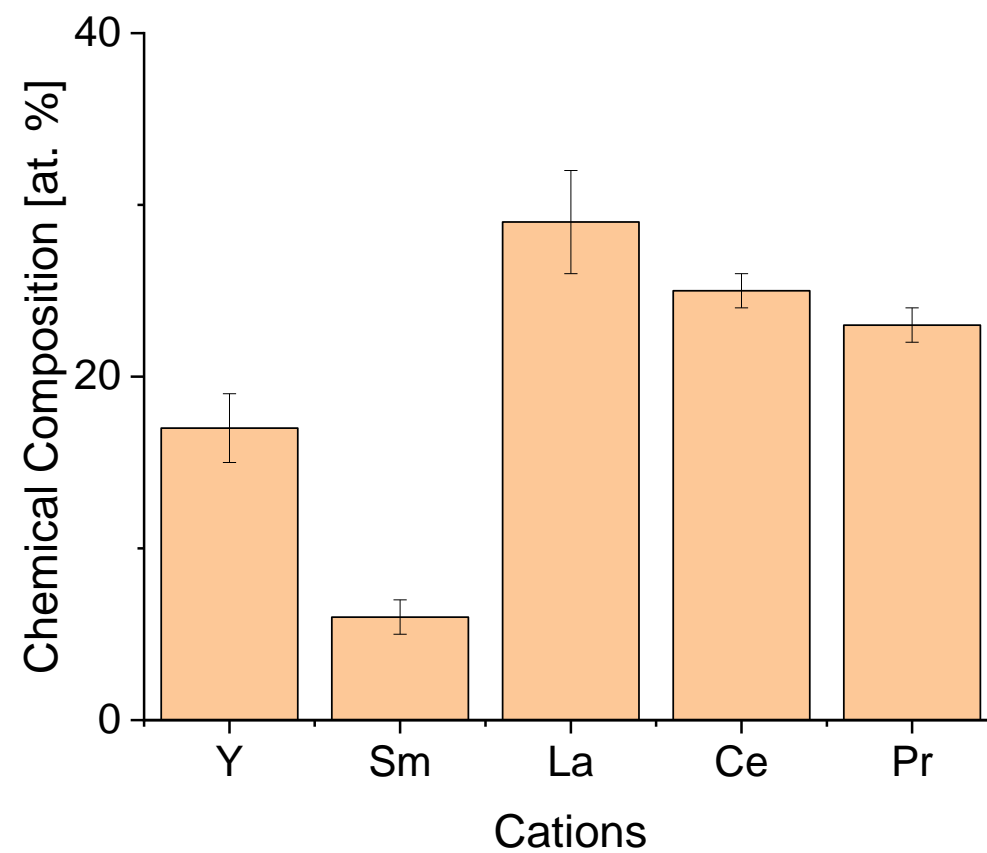




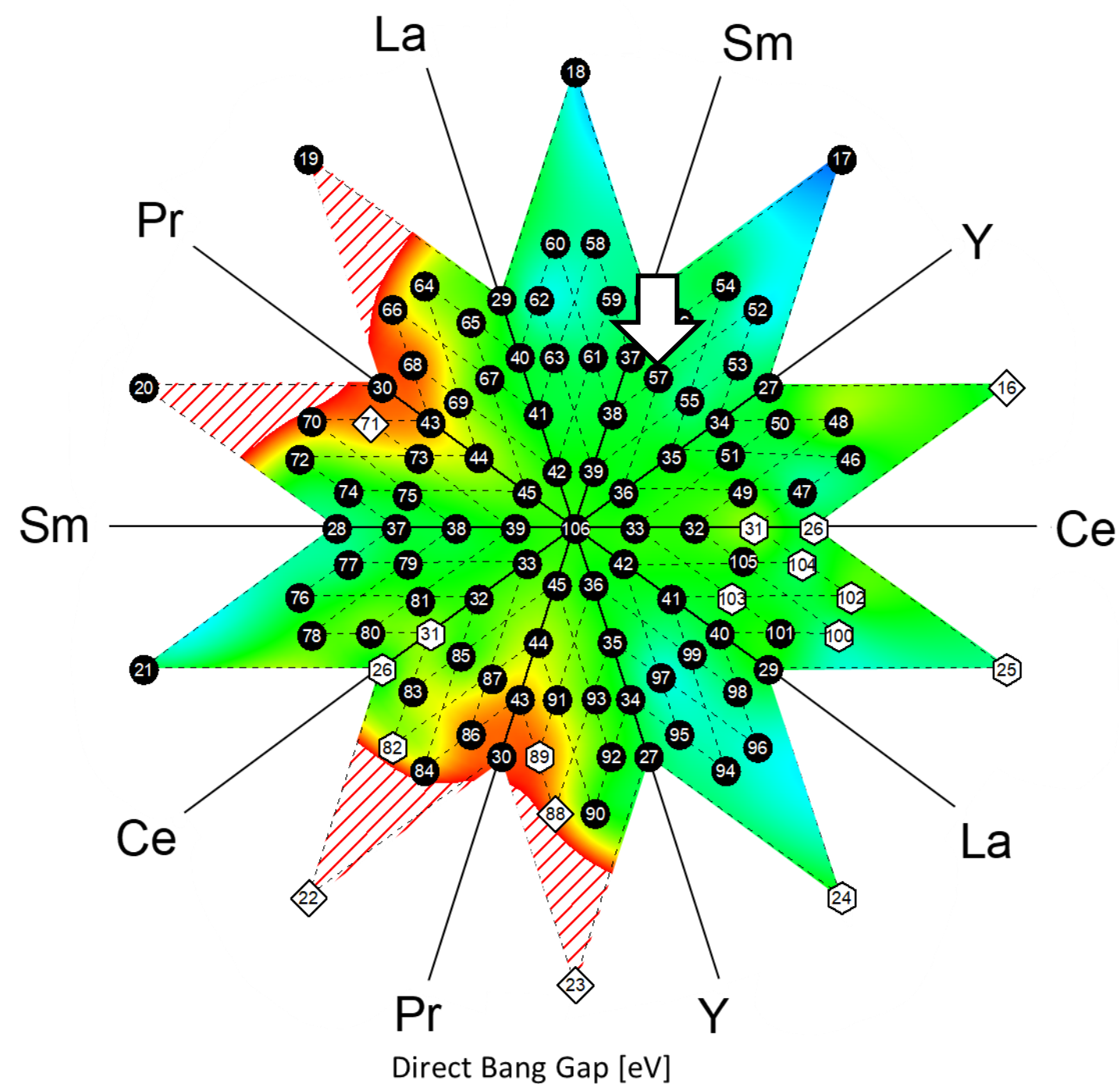
# Sample 56



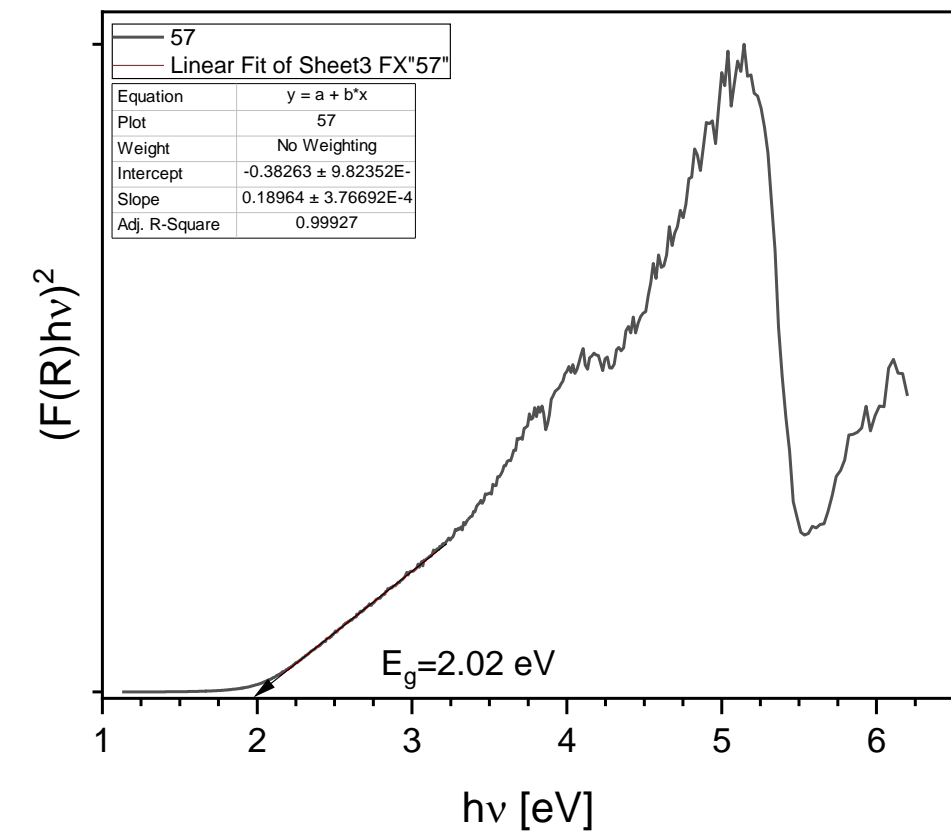
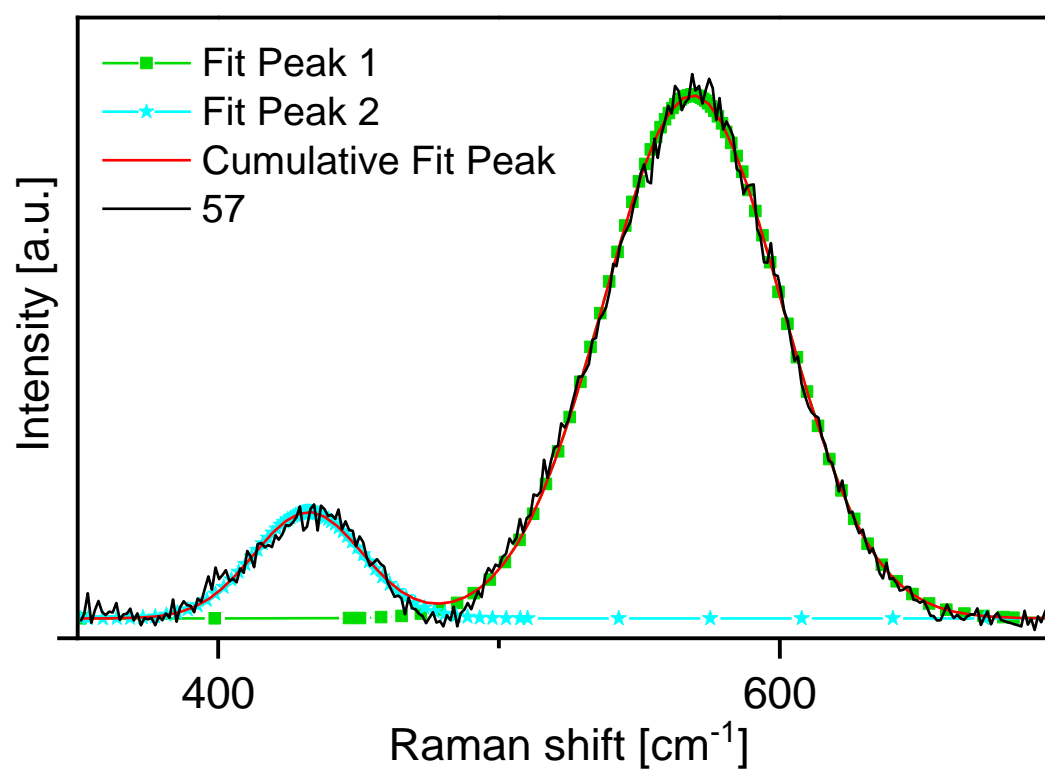
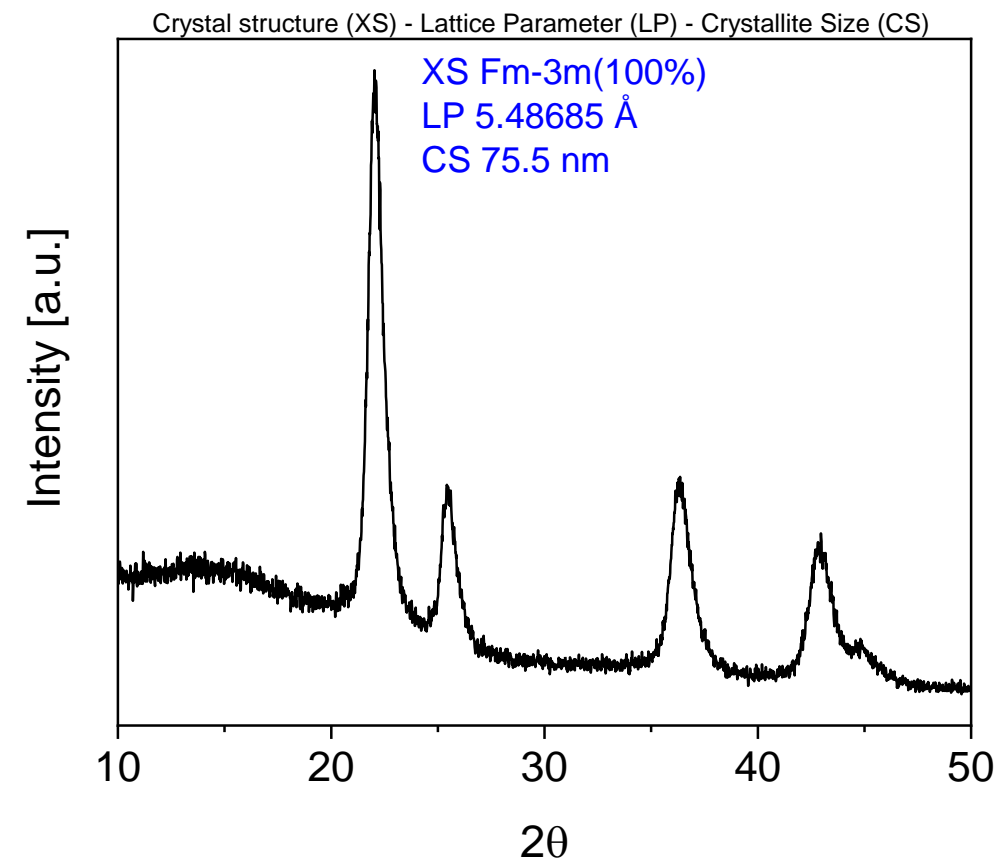
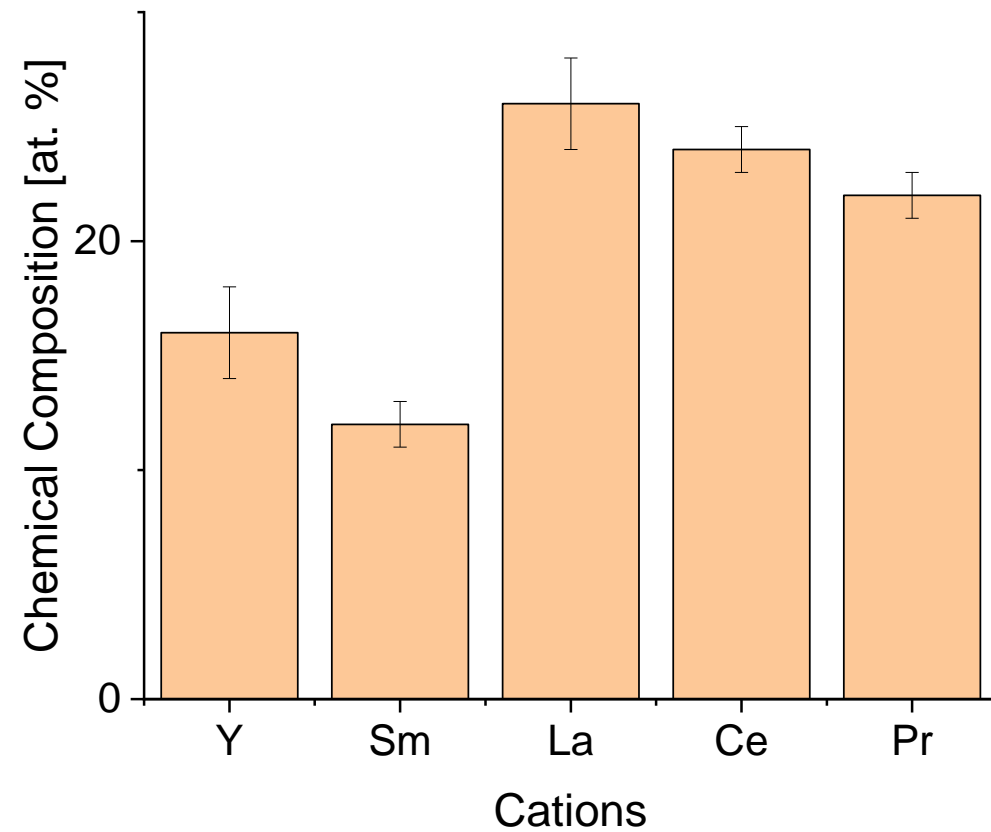
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



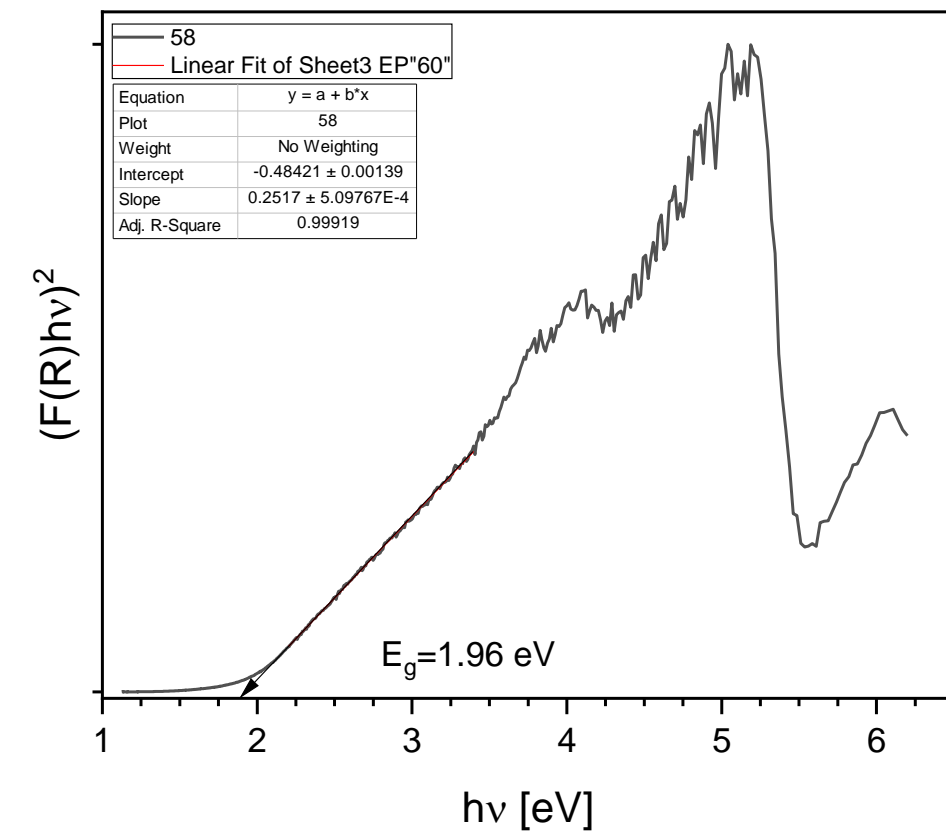
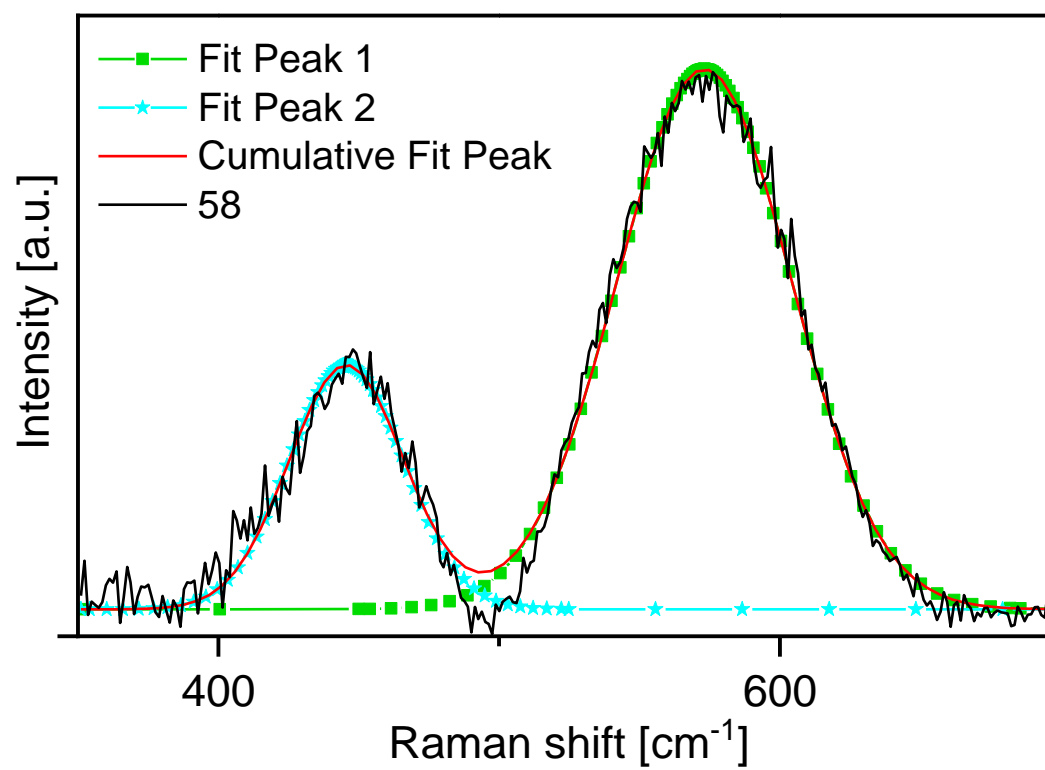
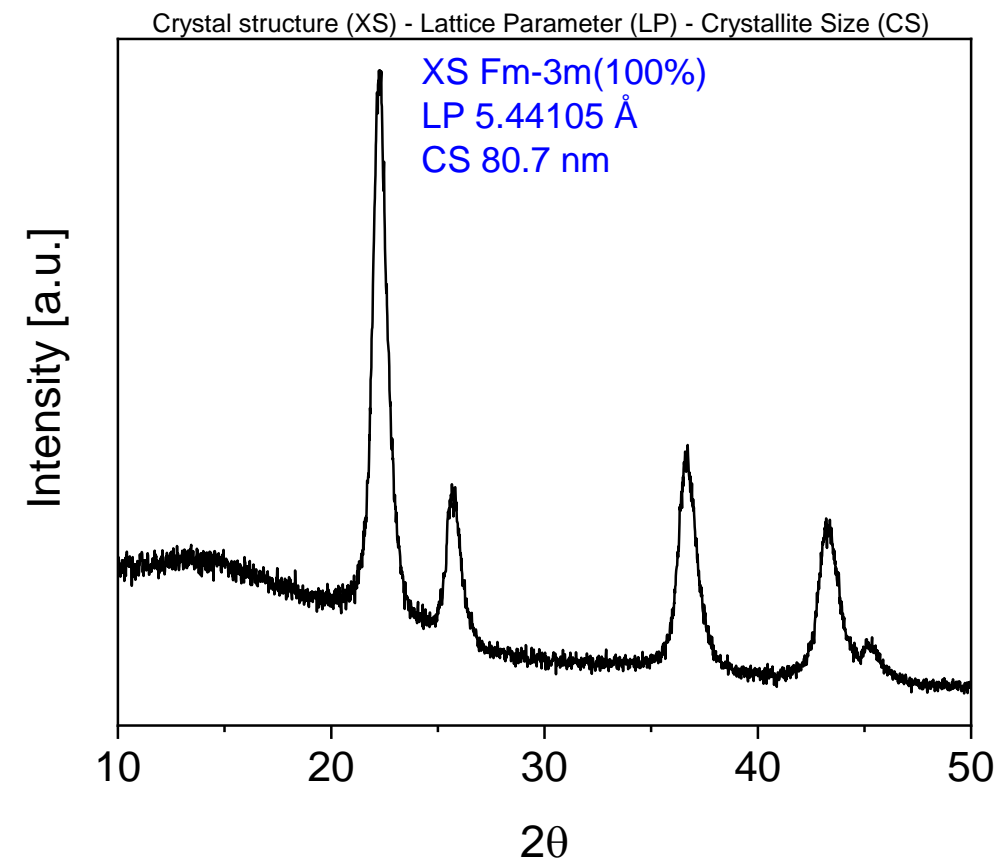
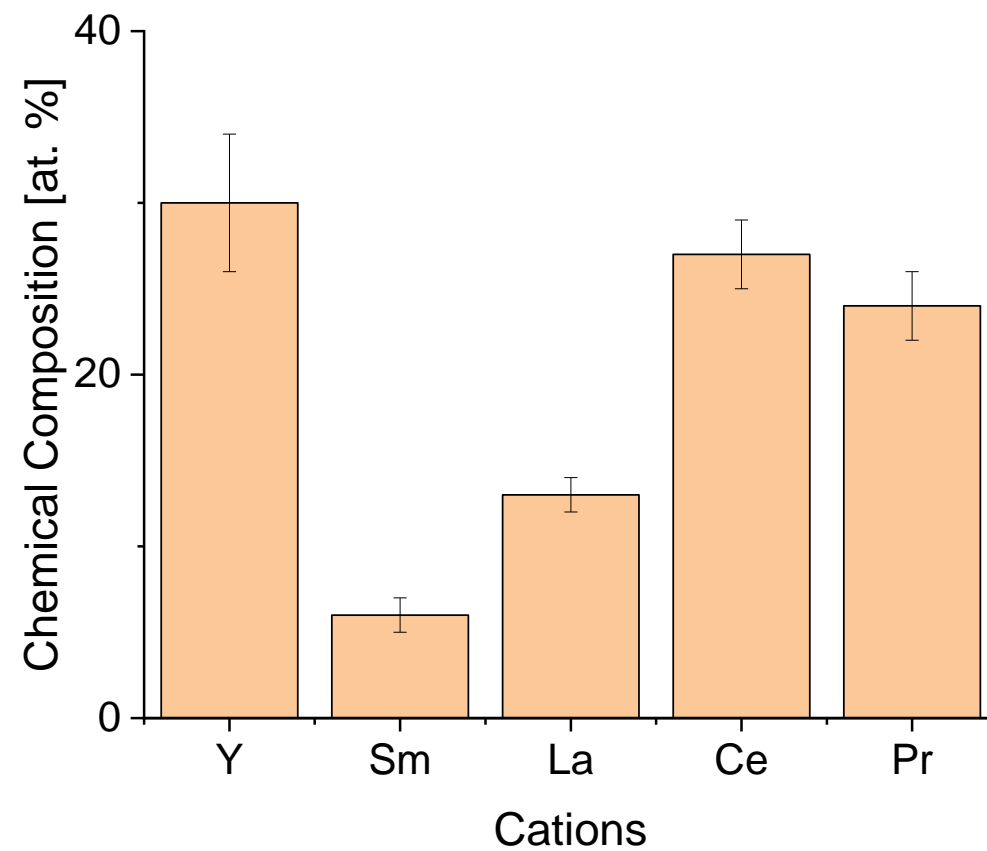
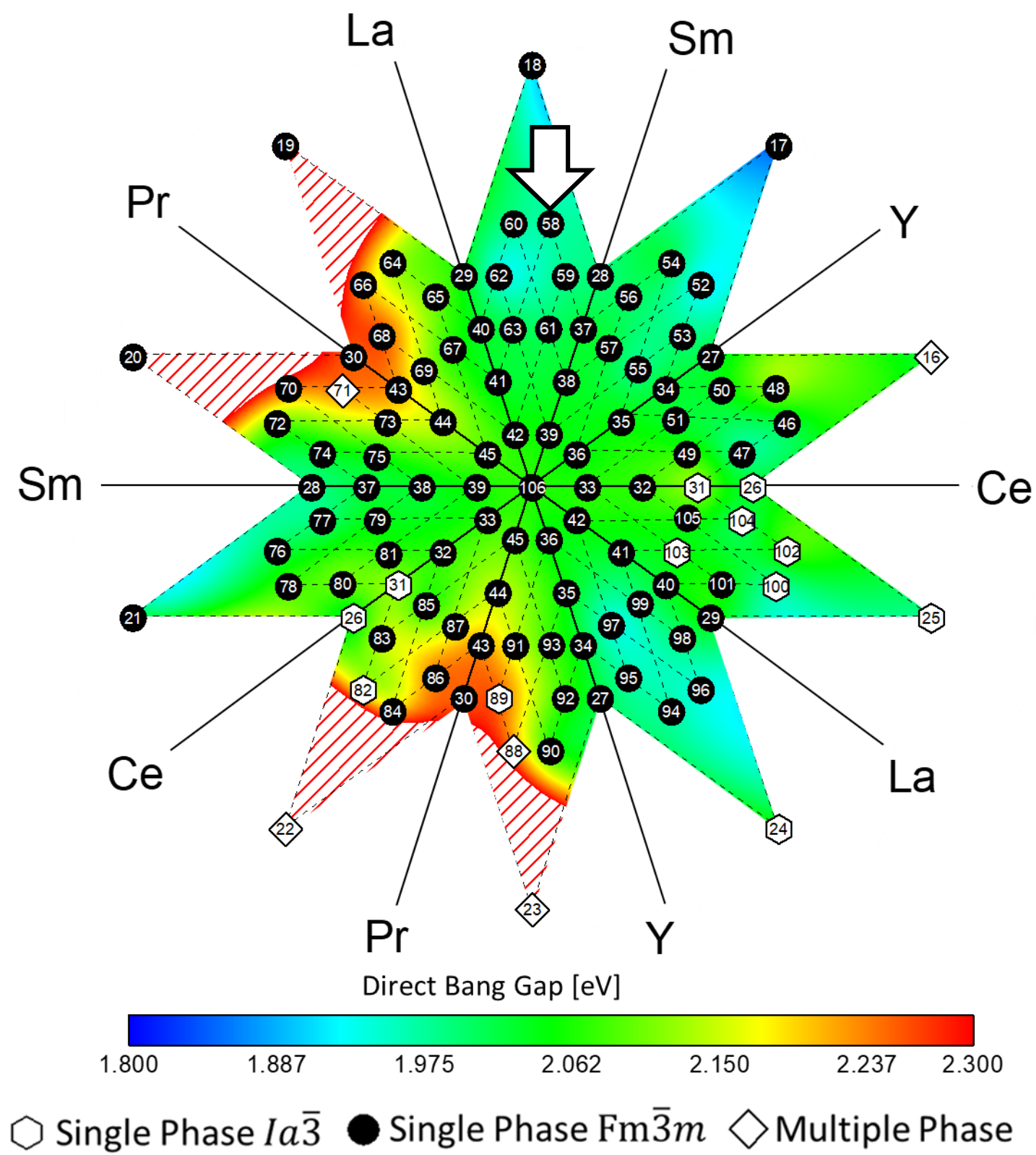
# Sample 57



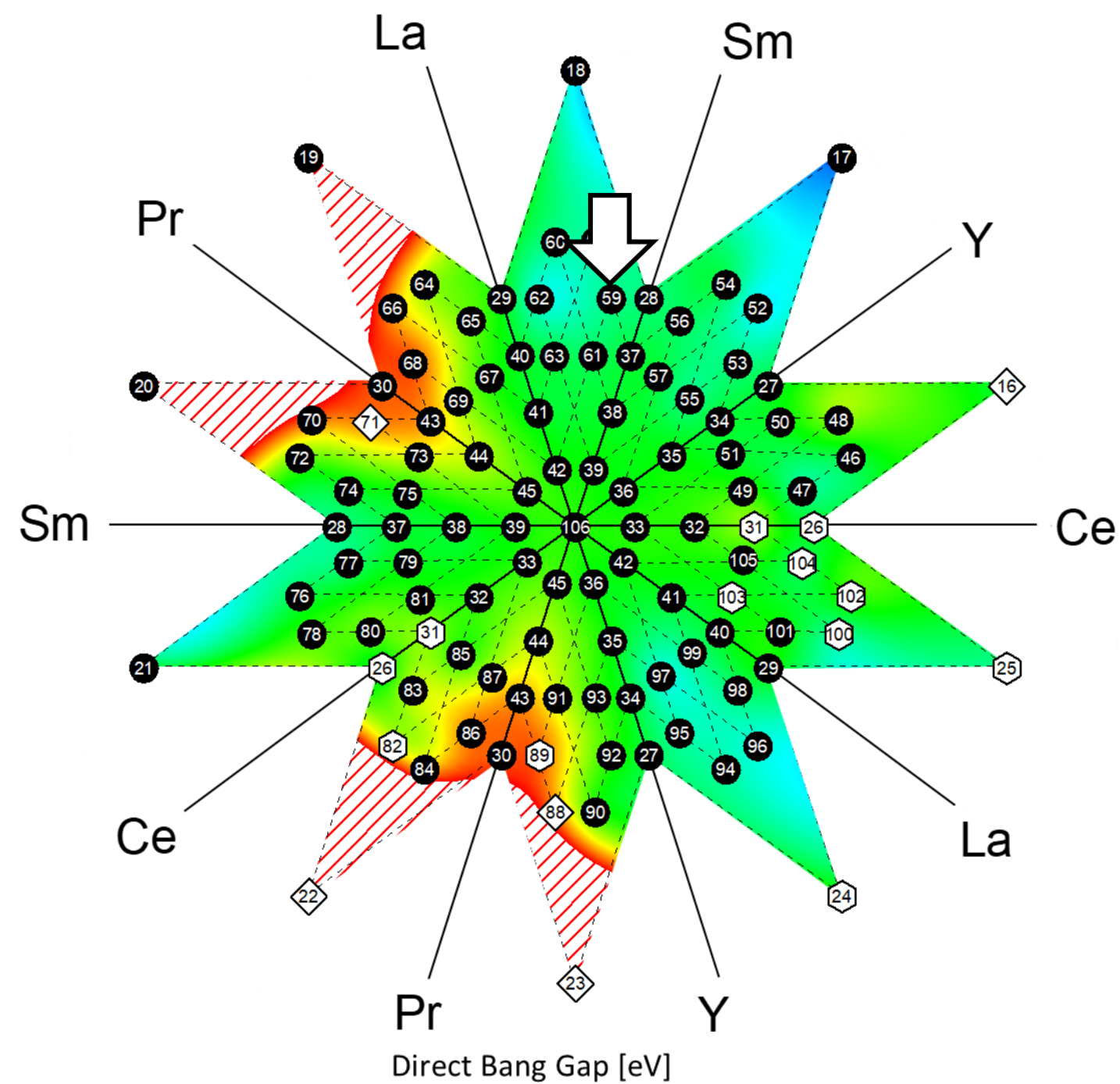
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



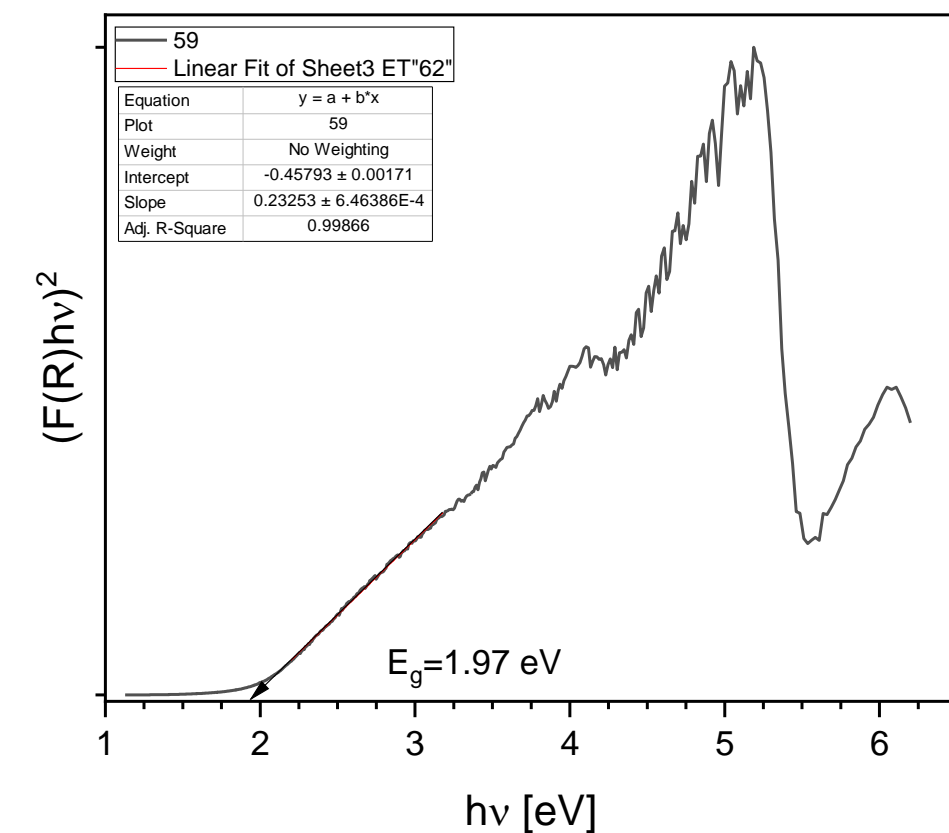
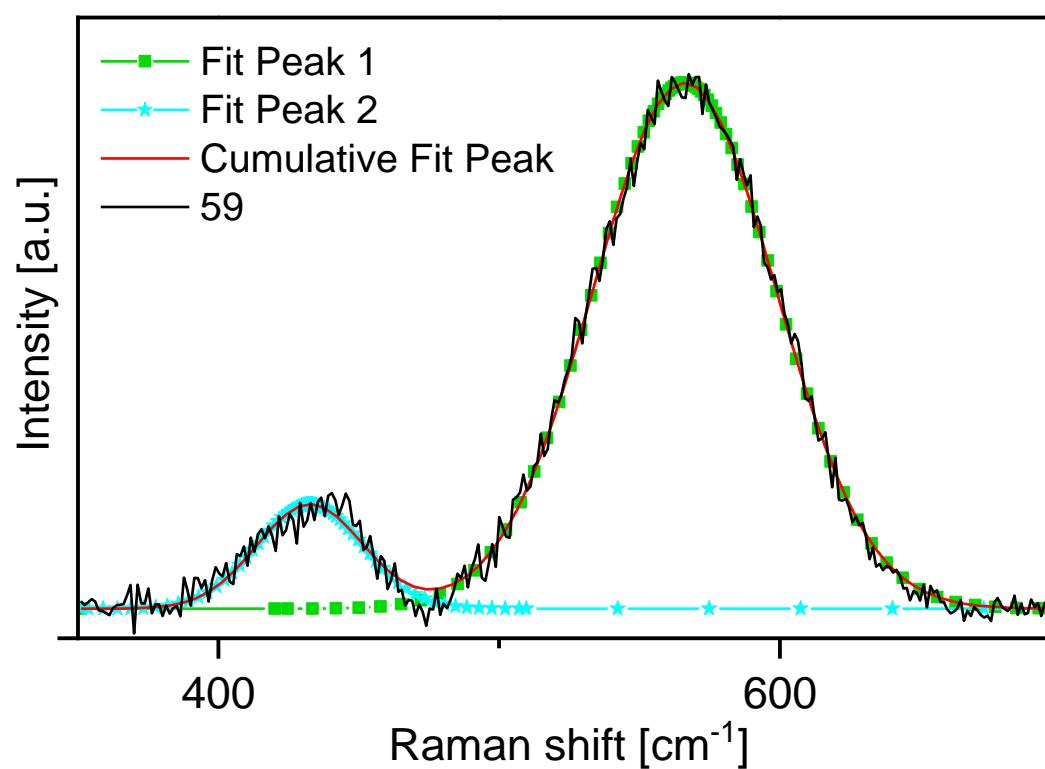
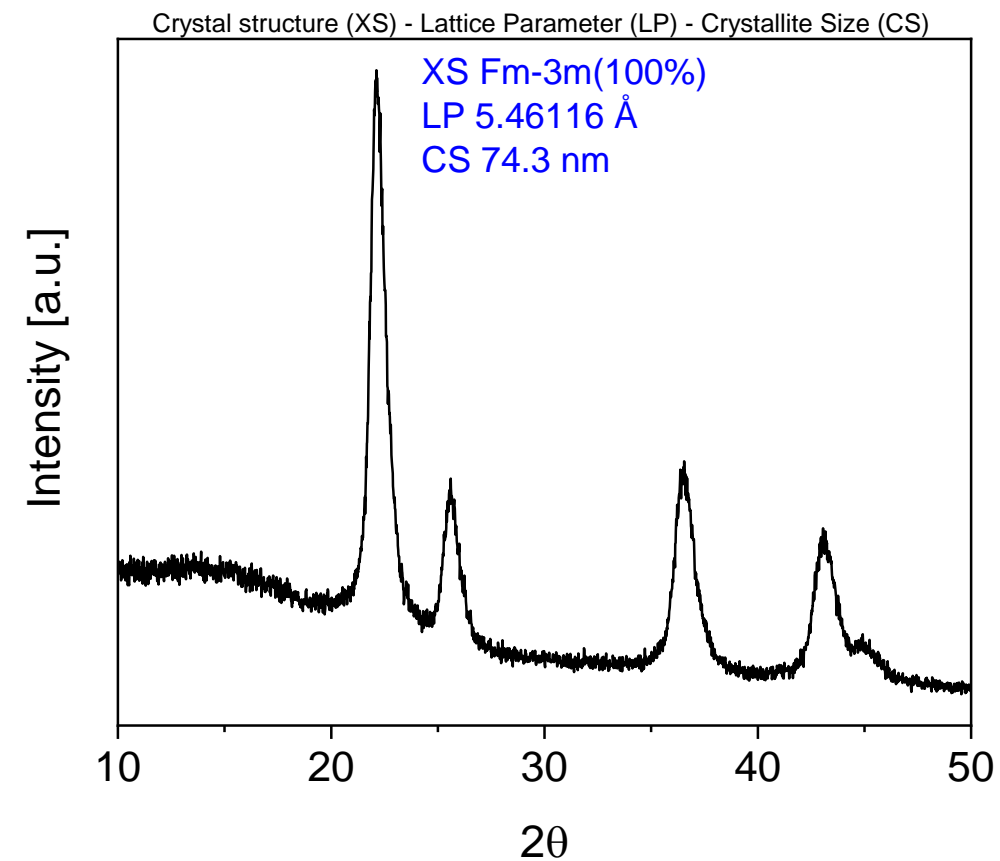
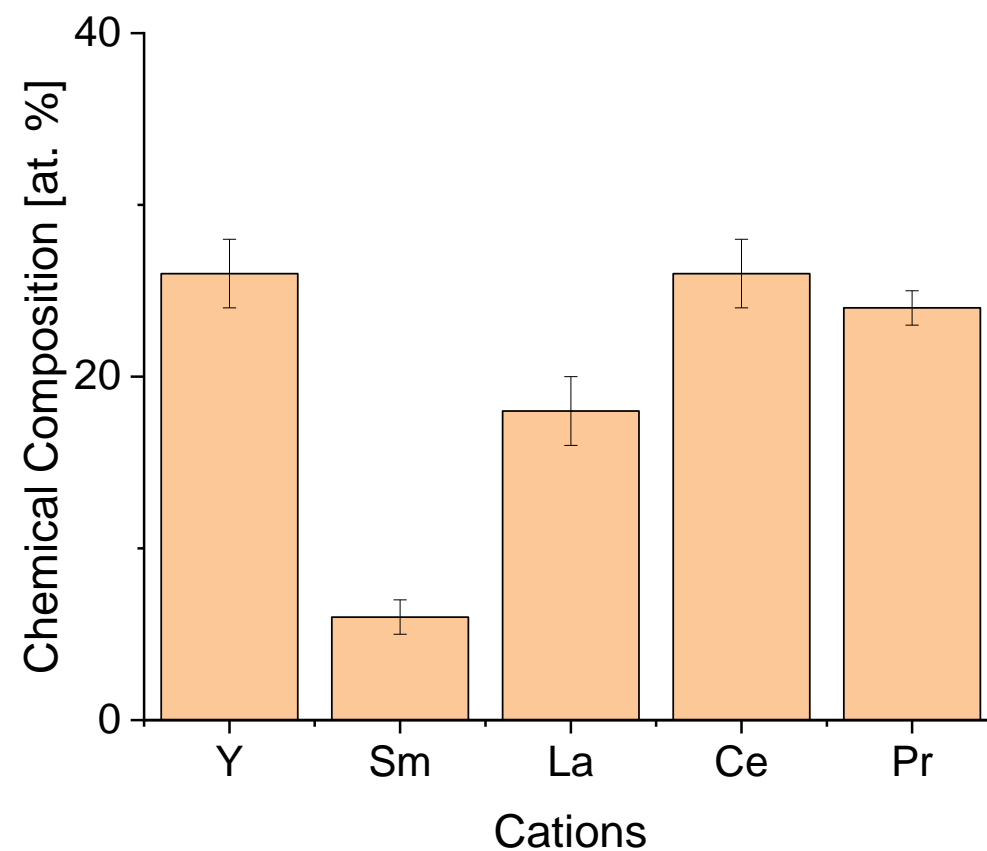
# Sample 58



# Sample 59

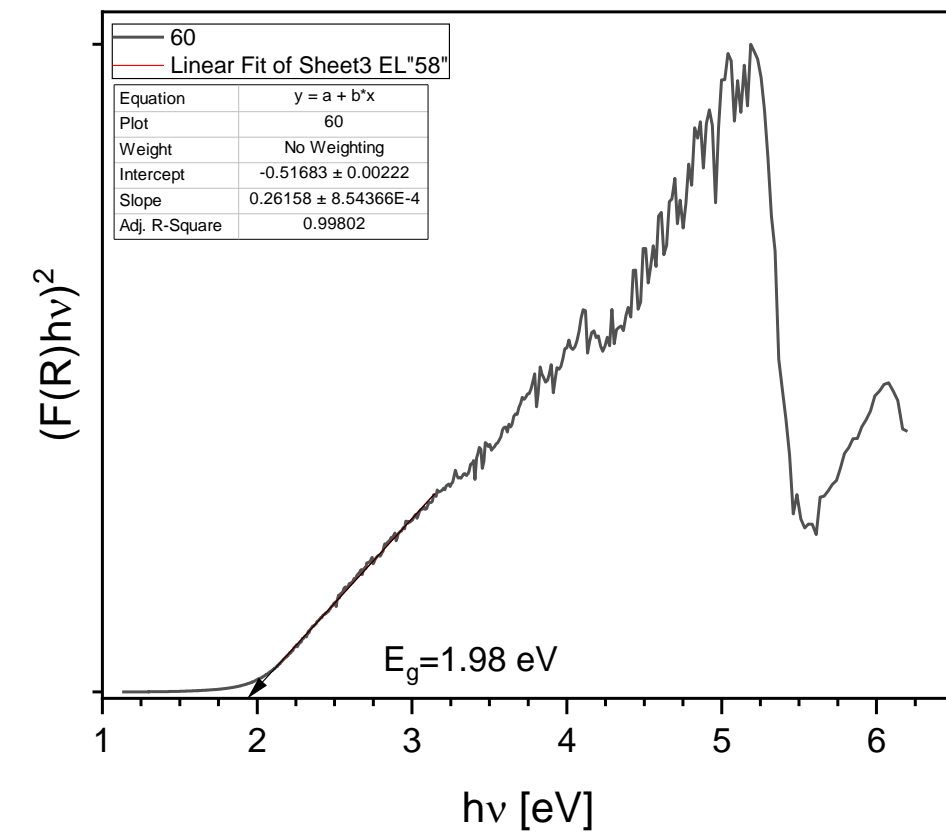
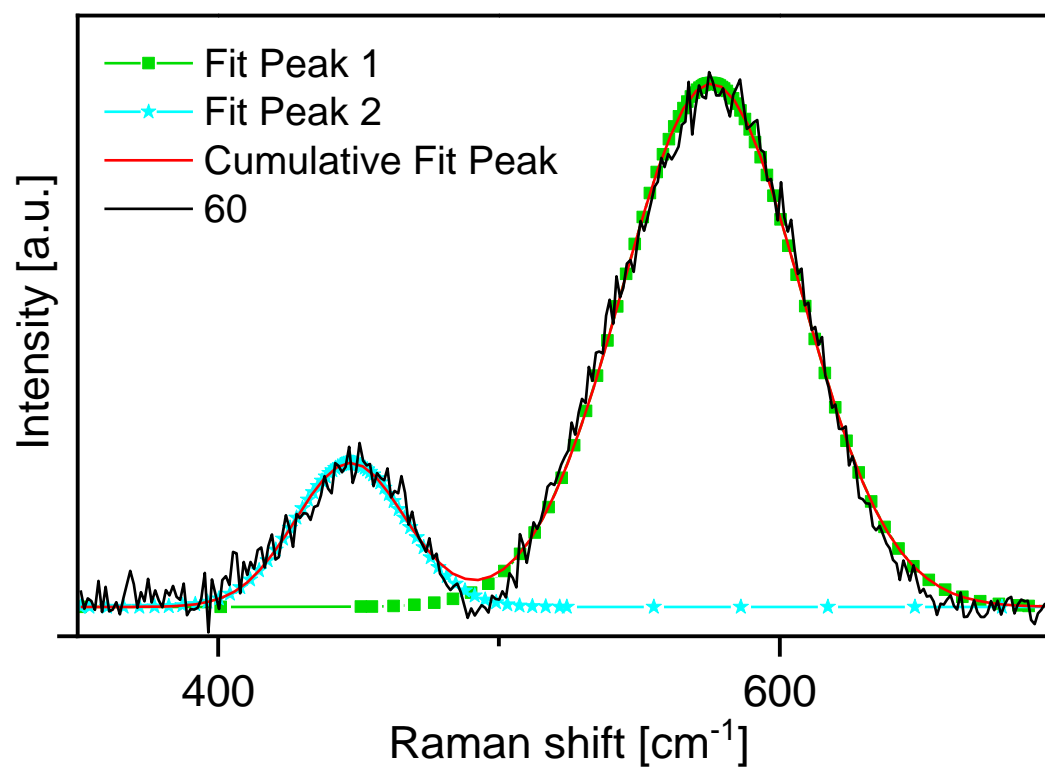
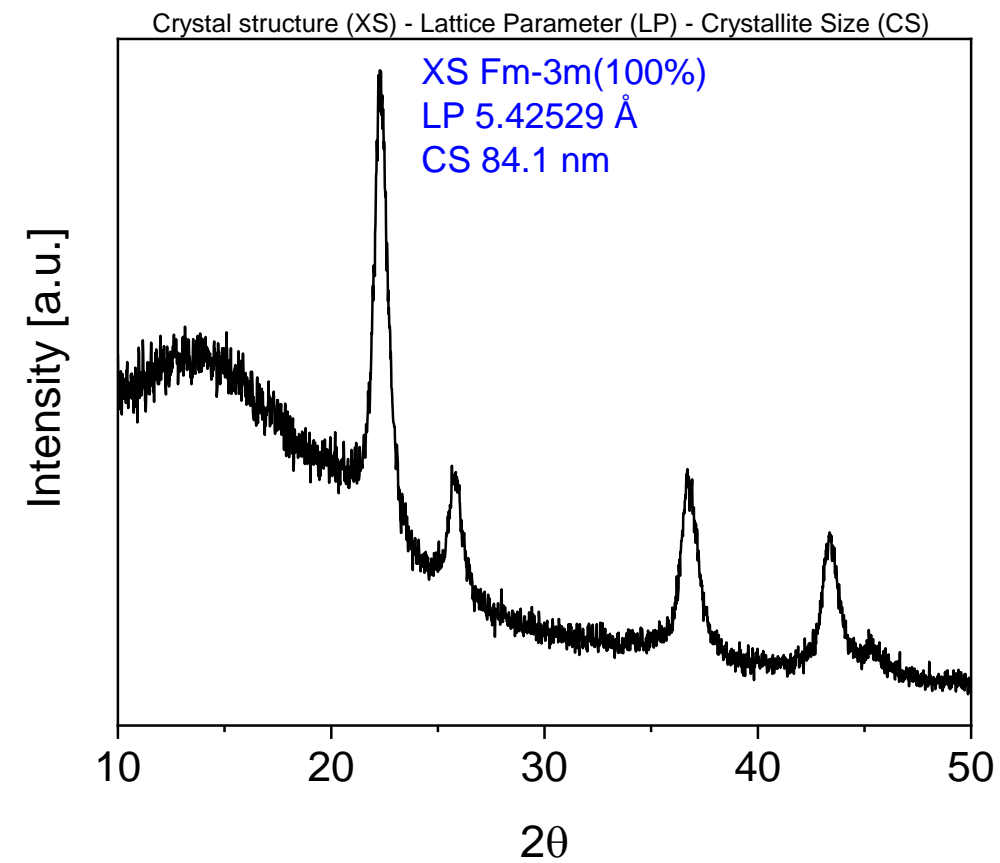
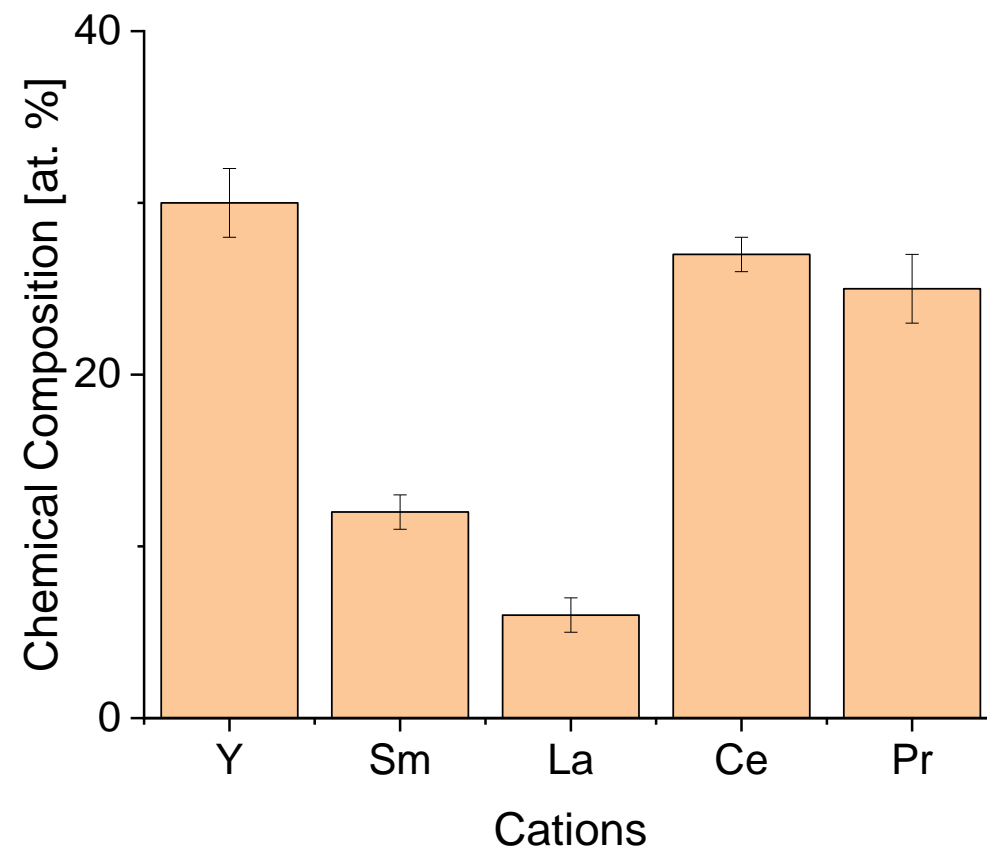
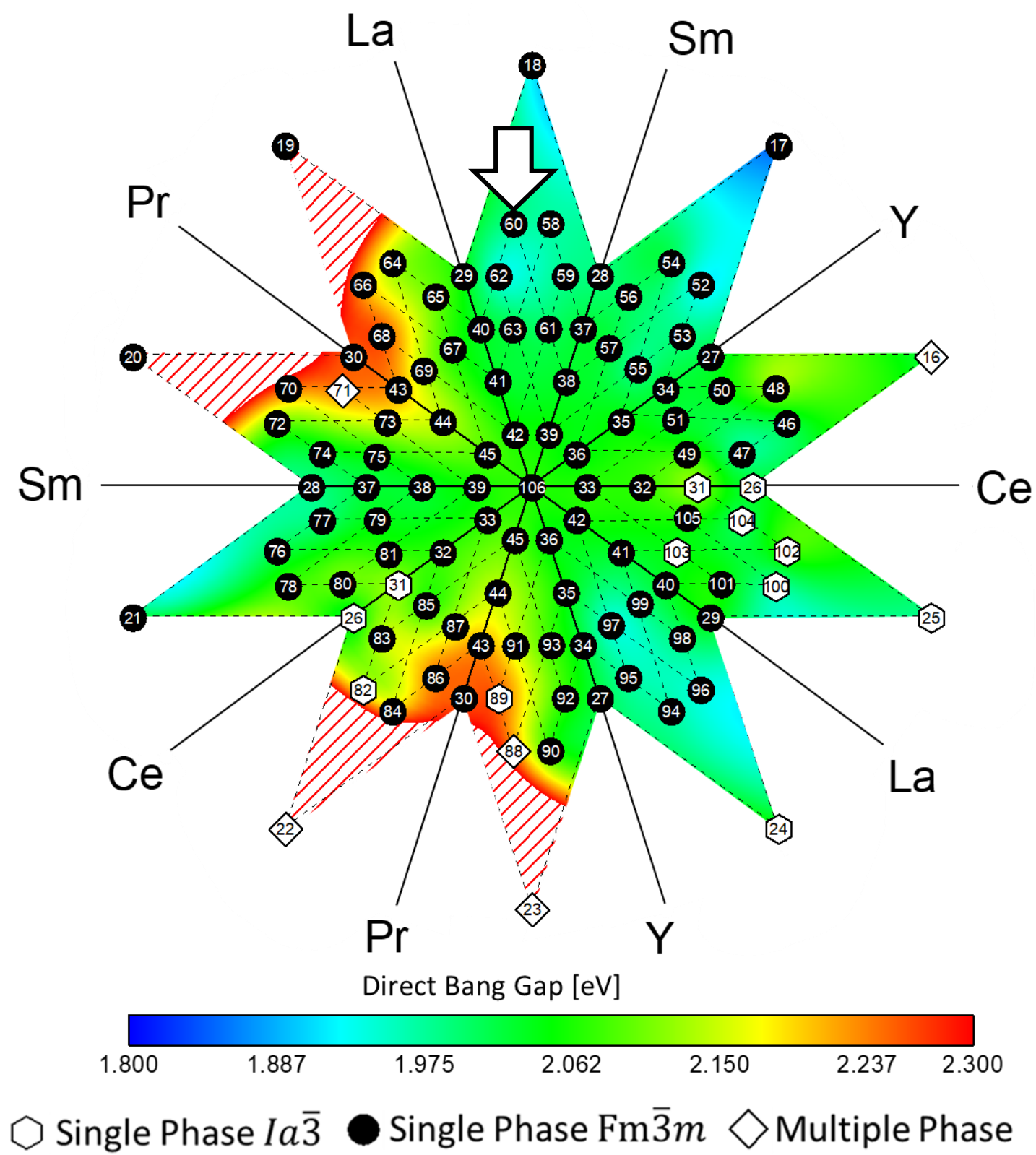


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

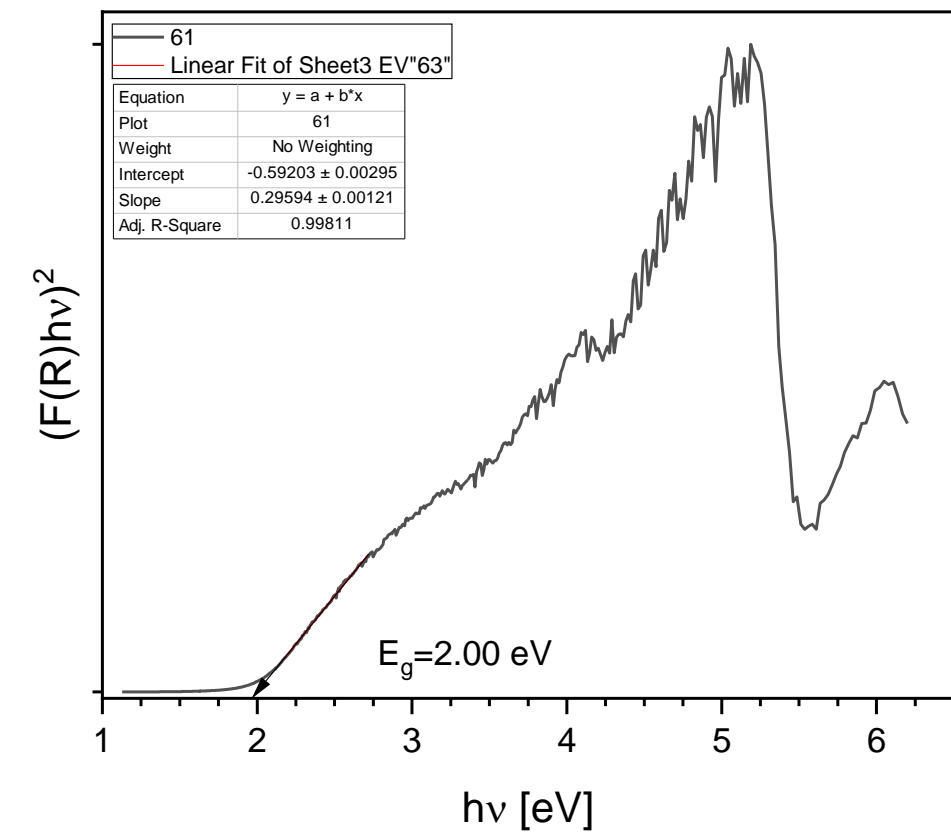
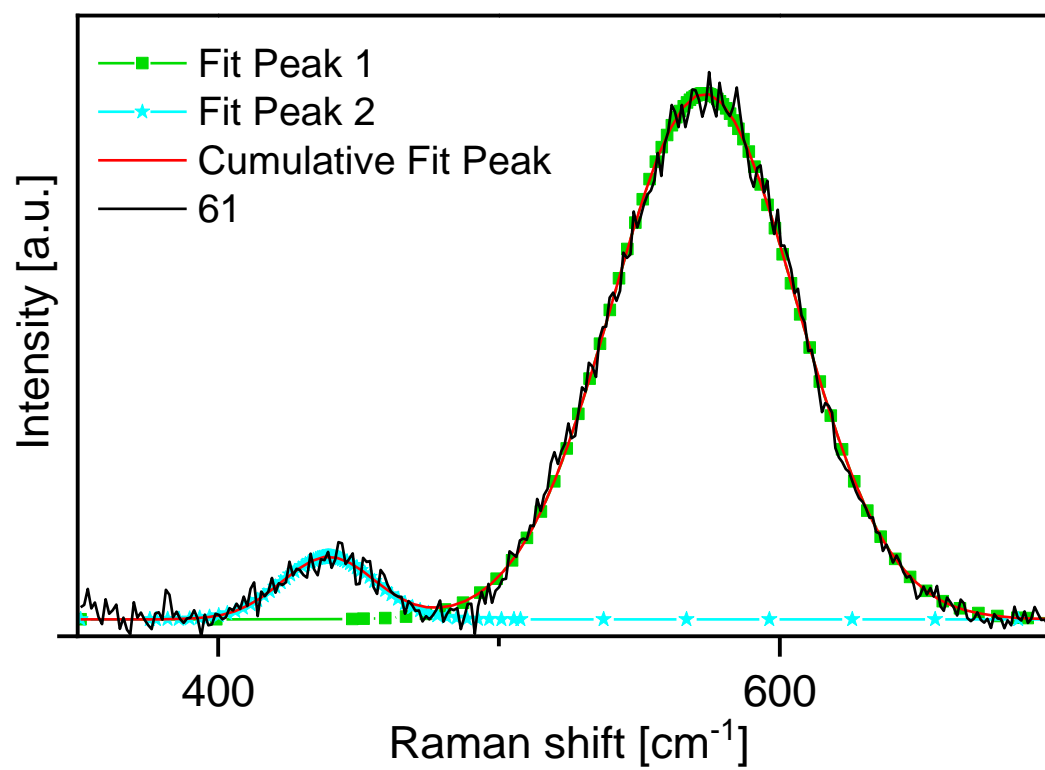
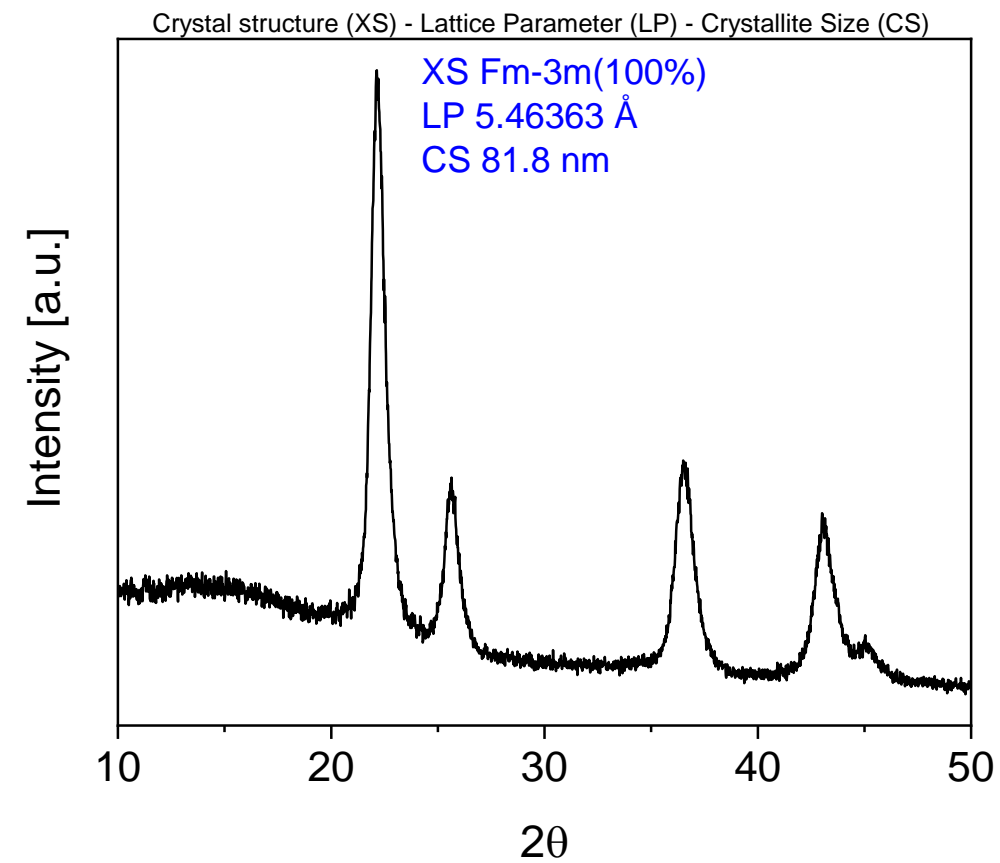
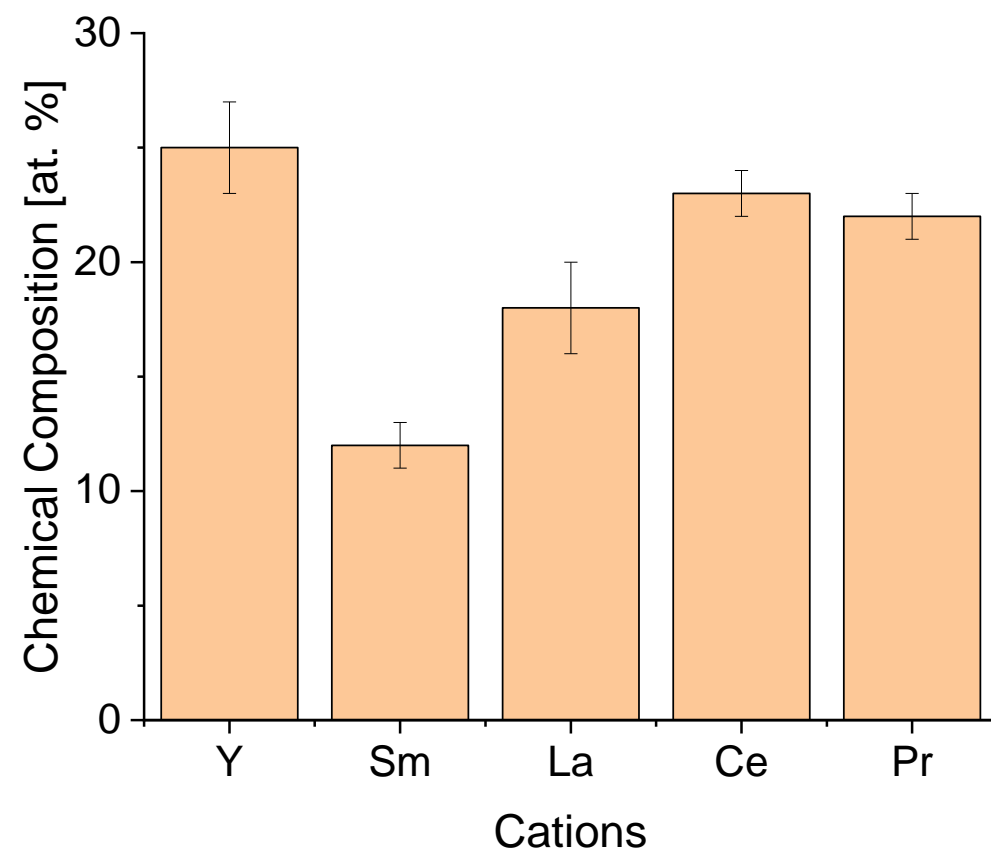
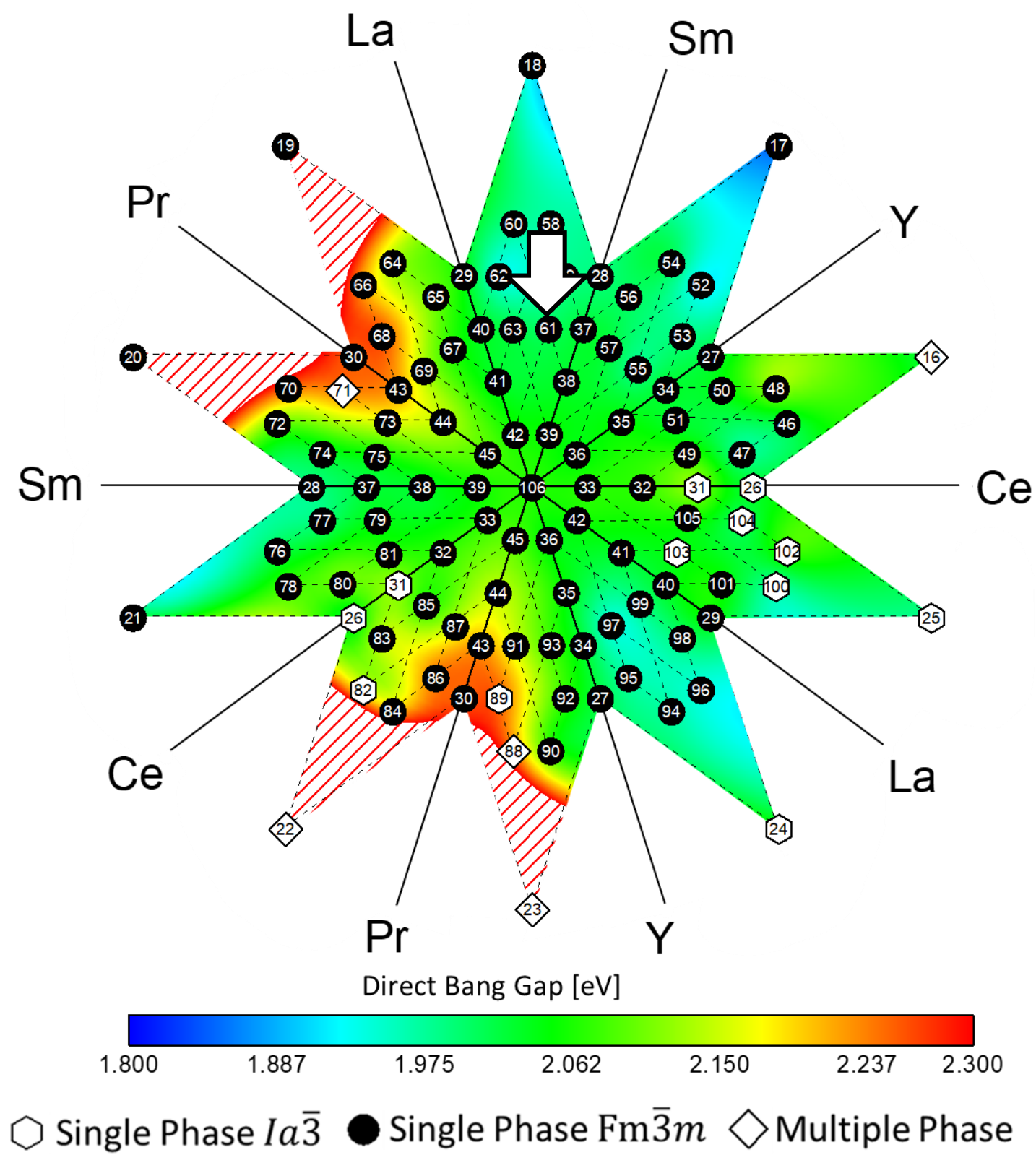




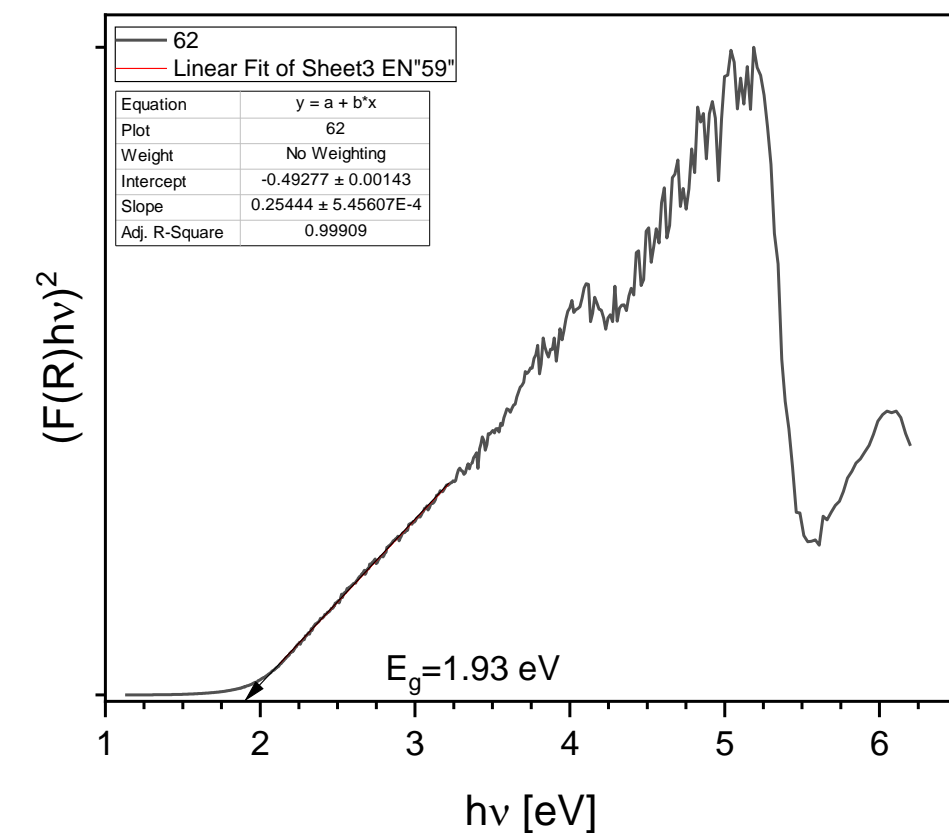
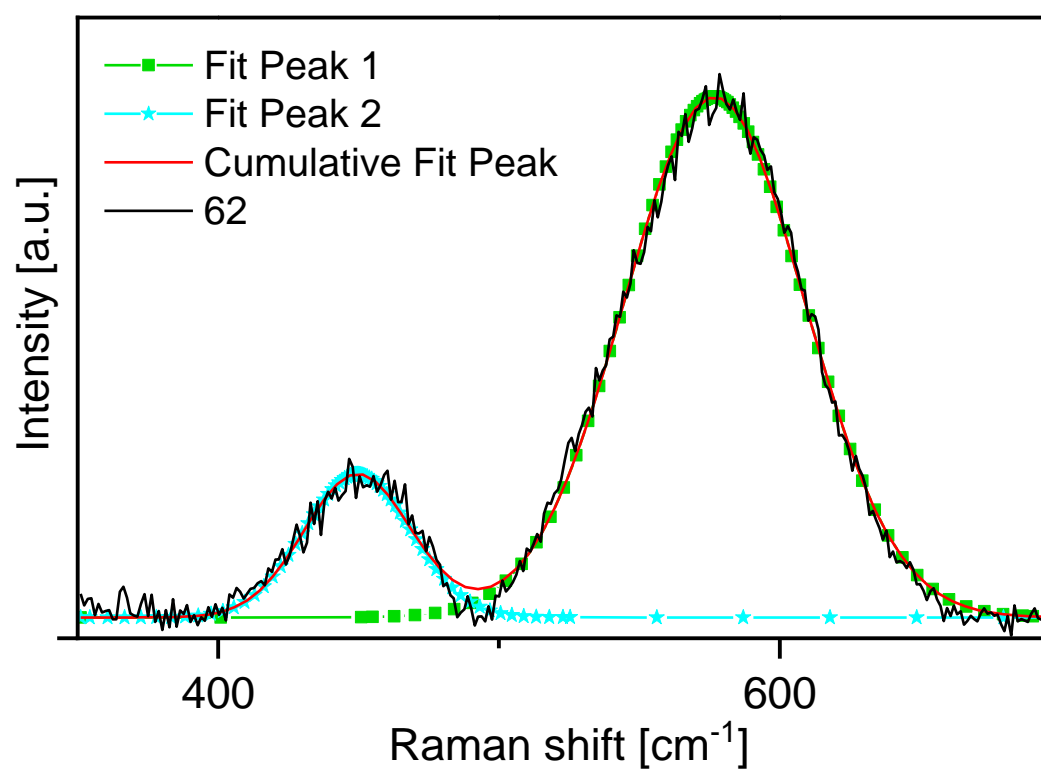
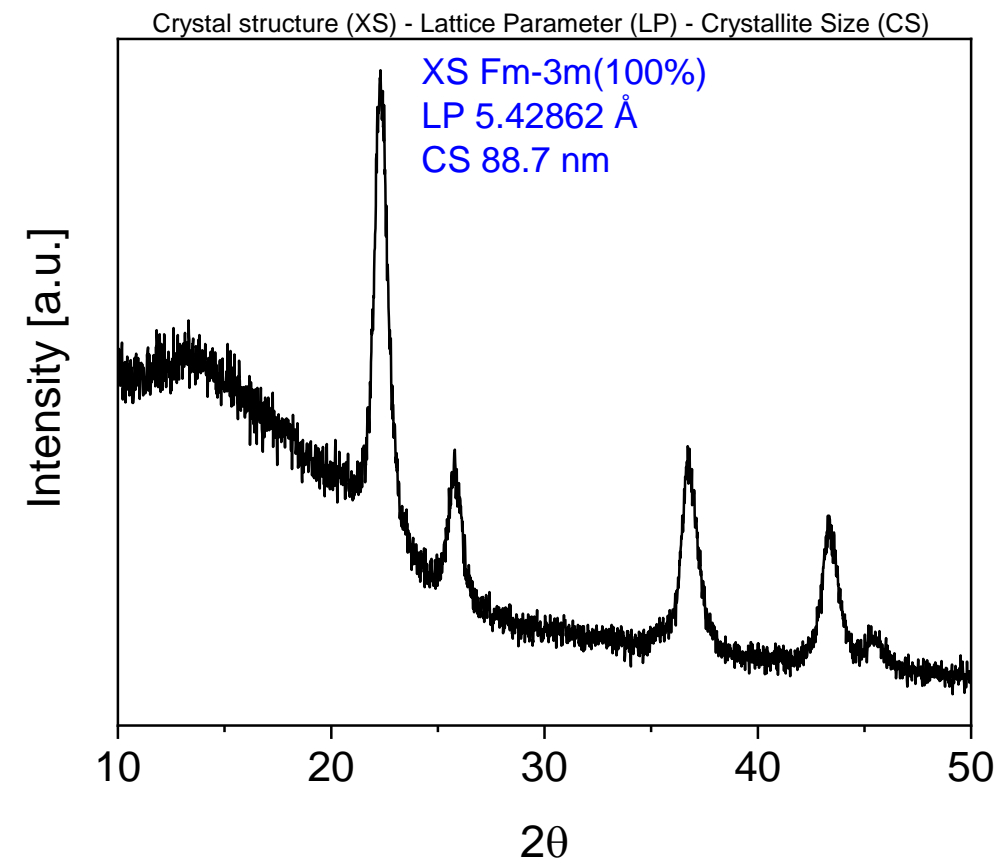
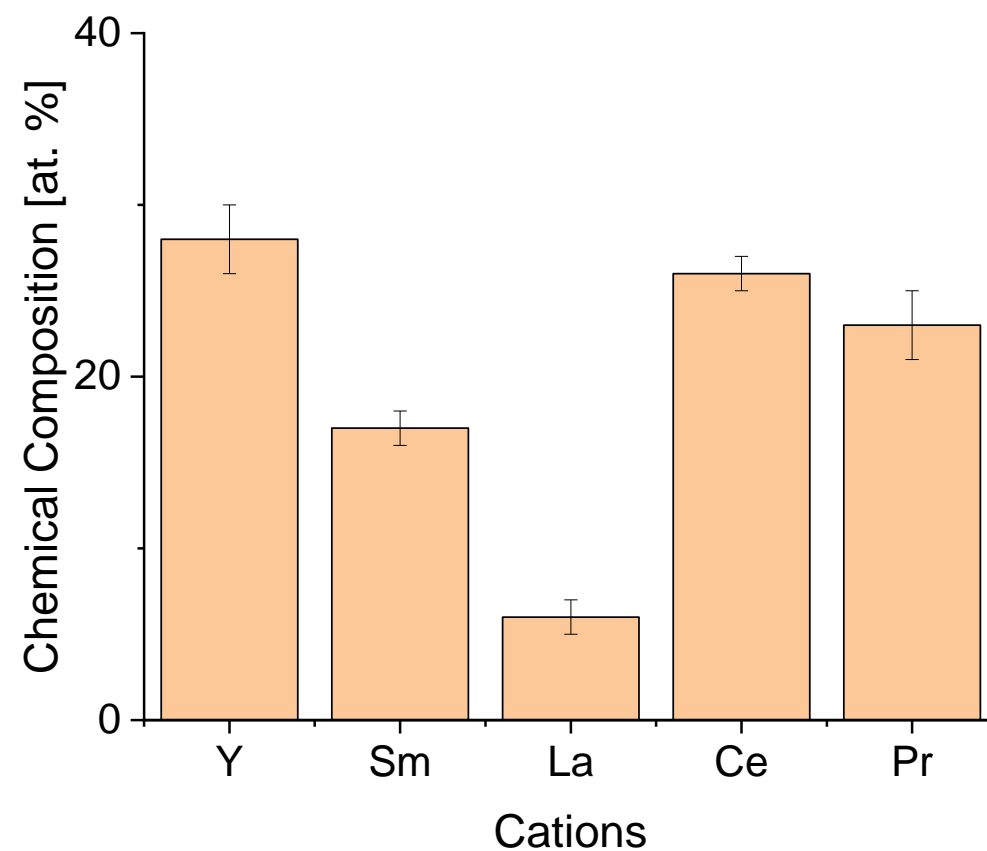
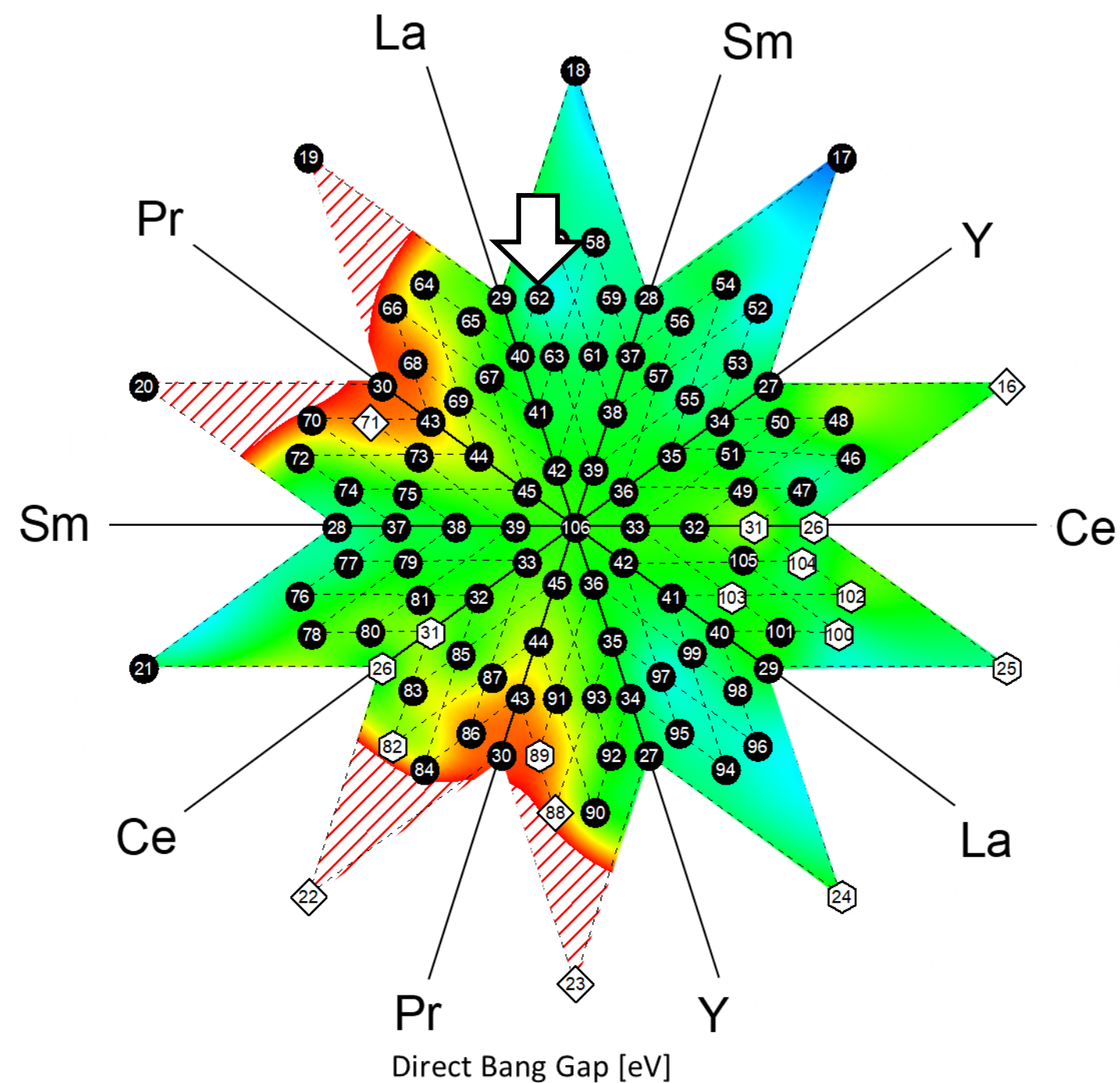
# Sample 60



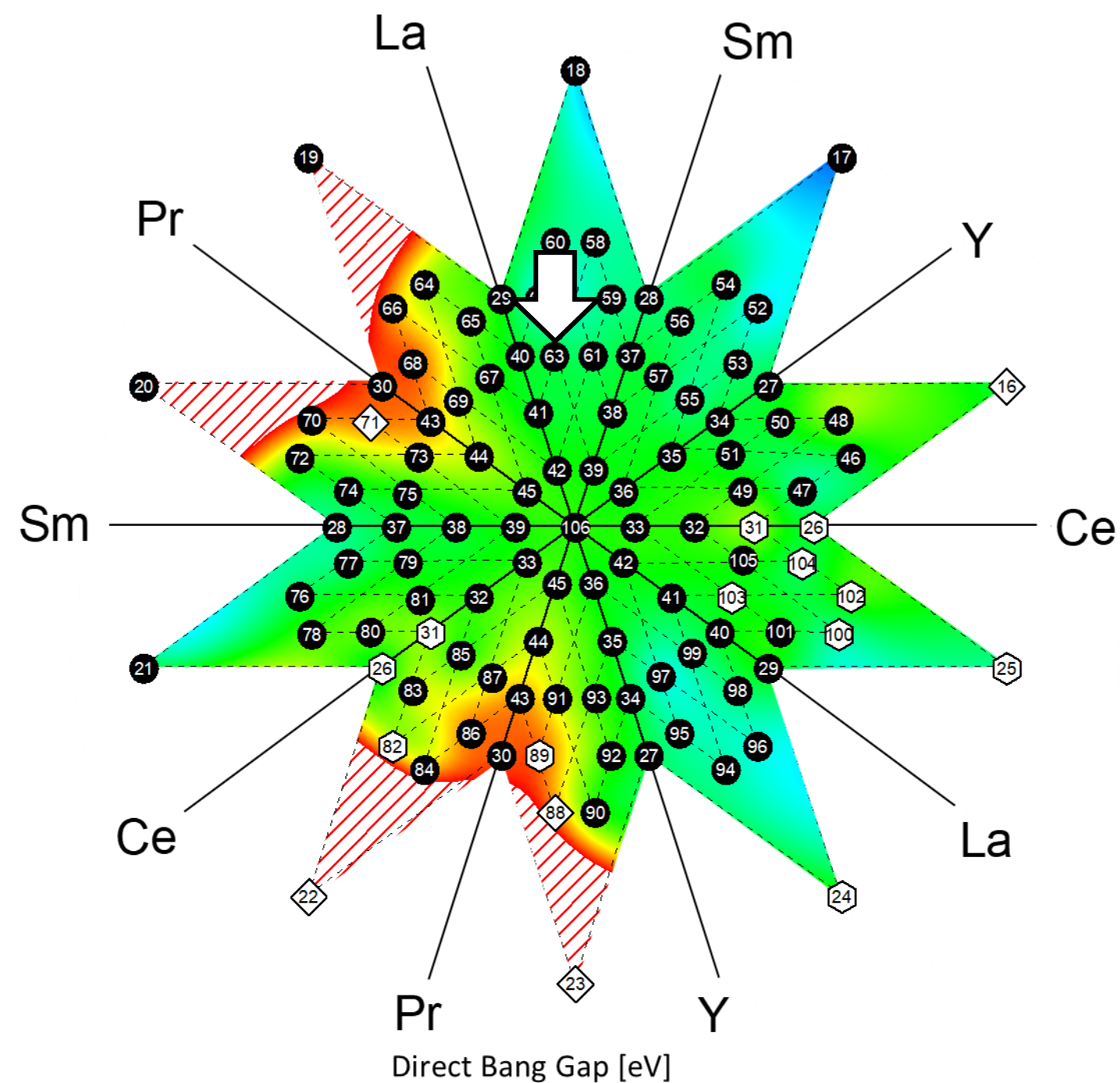
# Sample 61



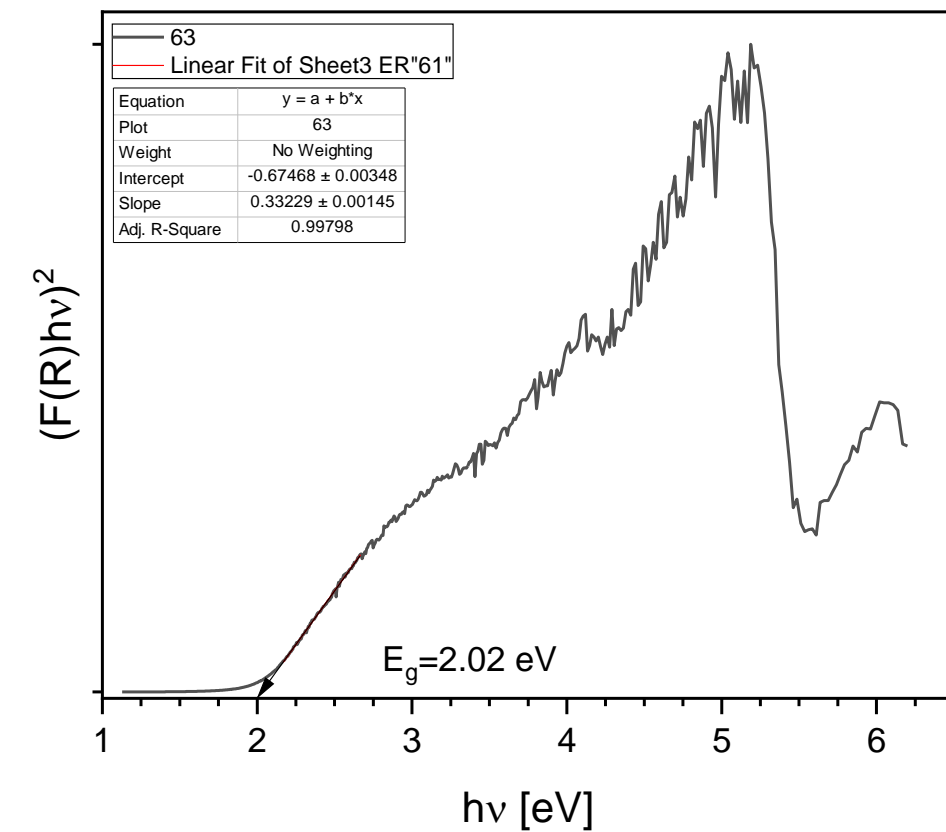
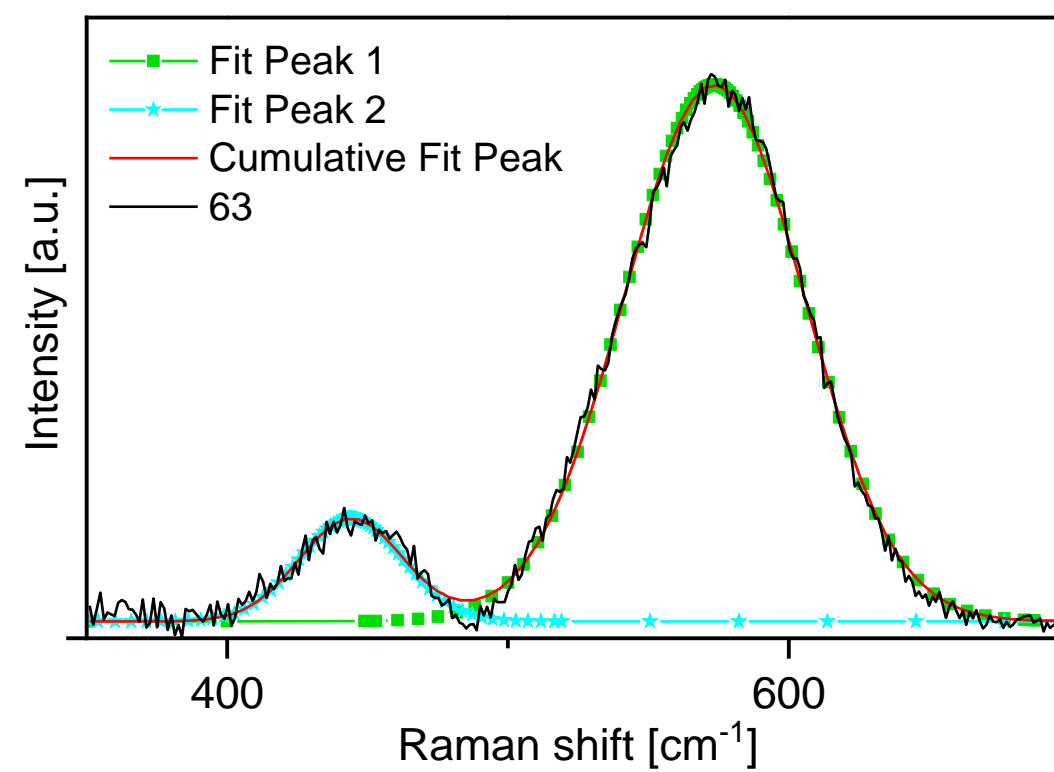
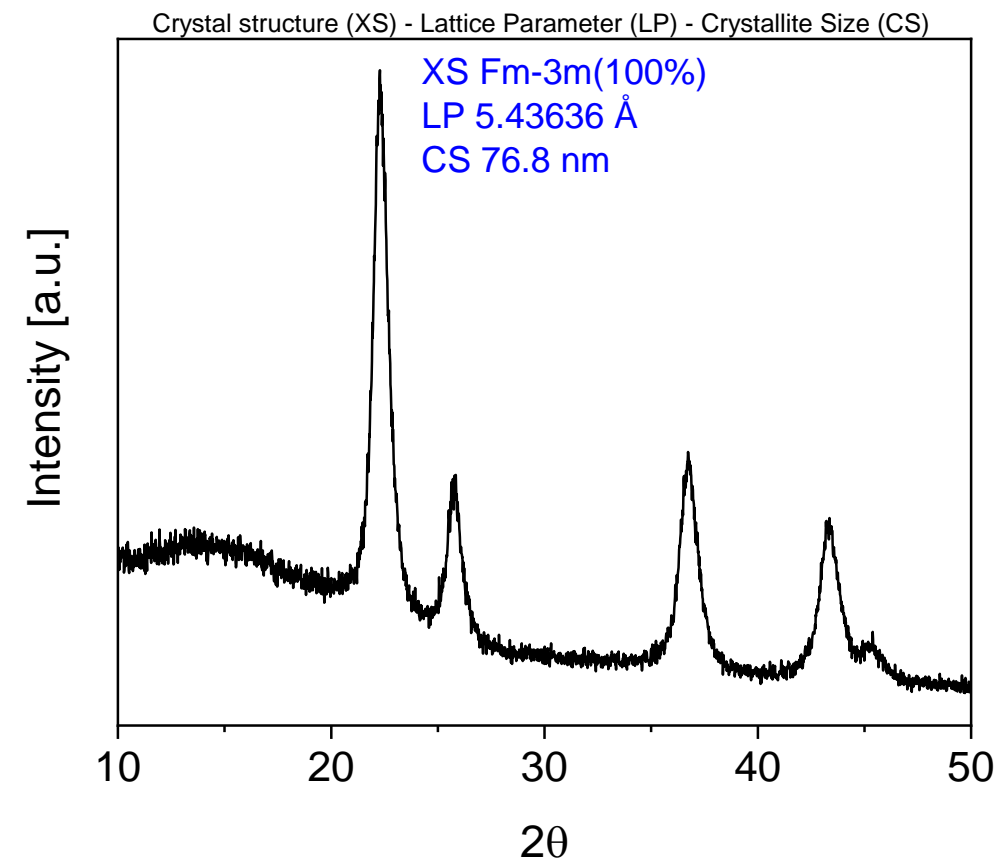
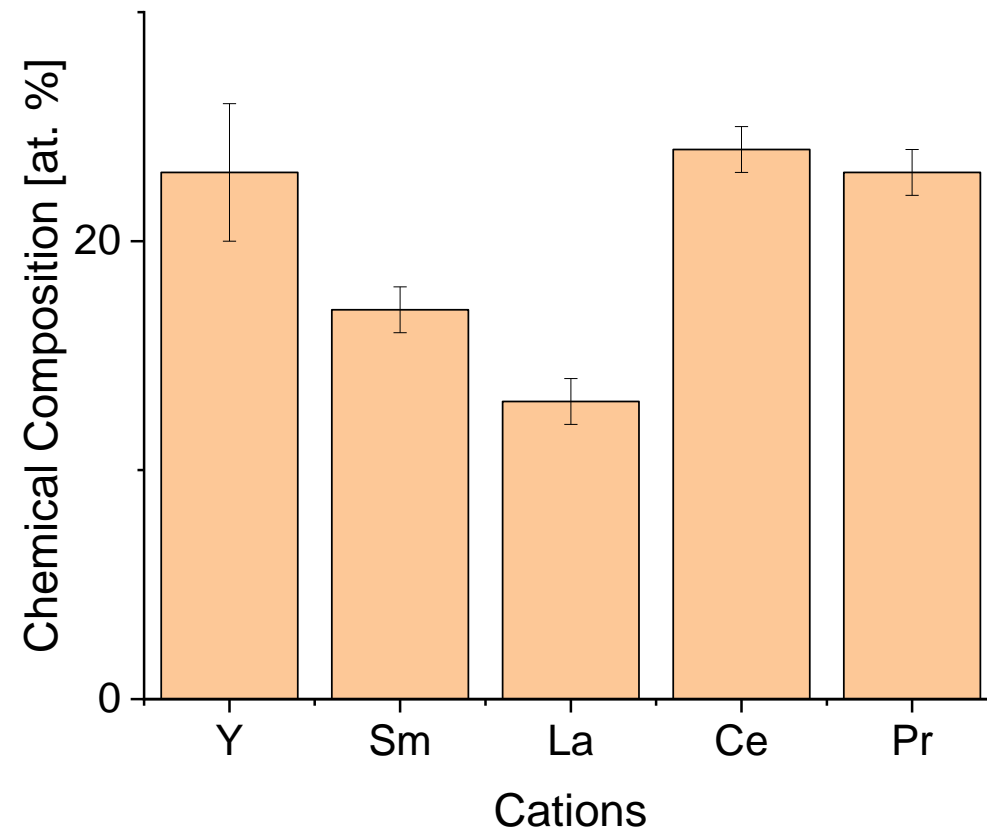
# Sample 62



# Sample 63

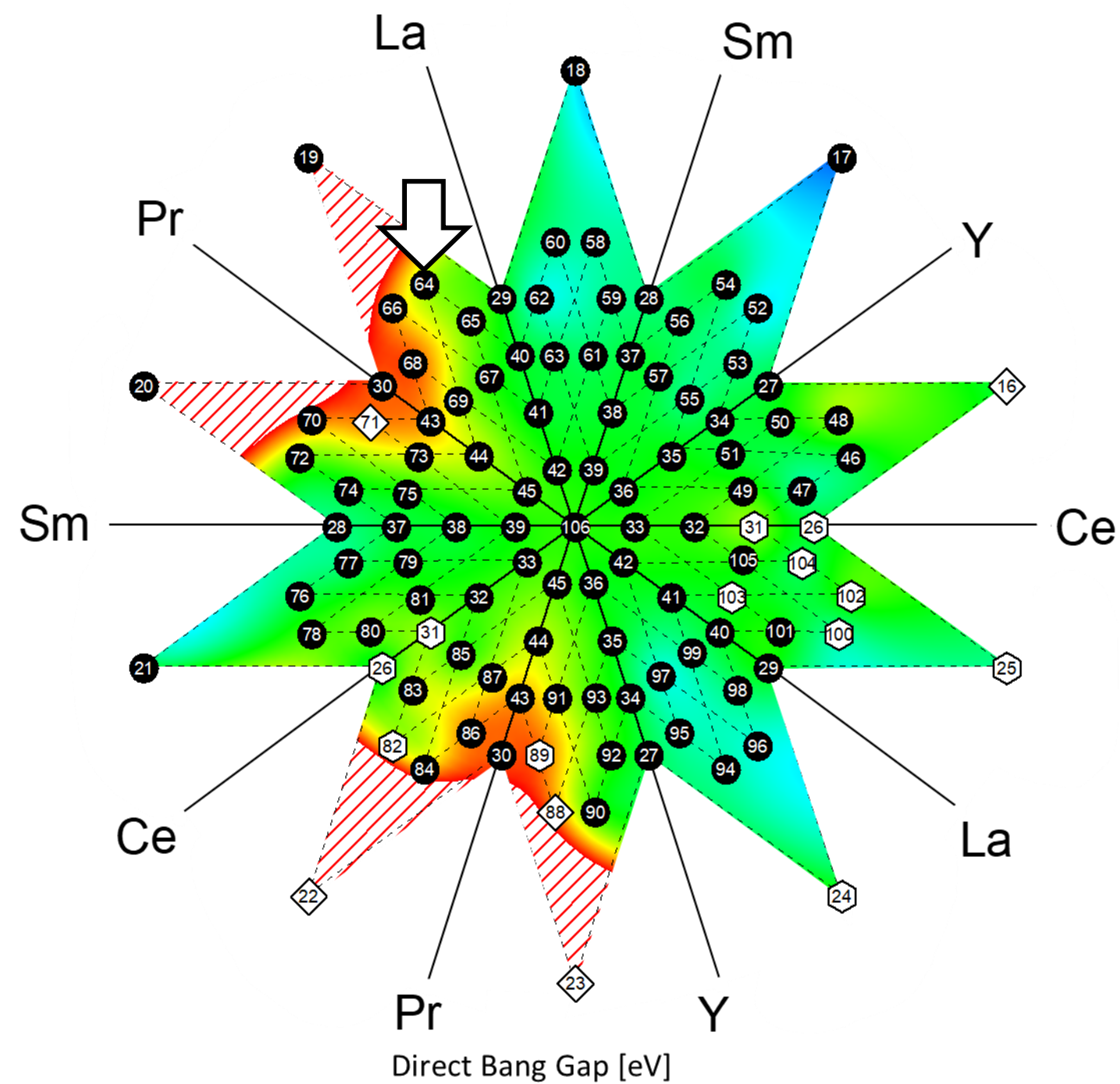


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

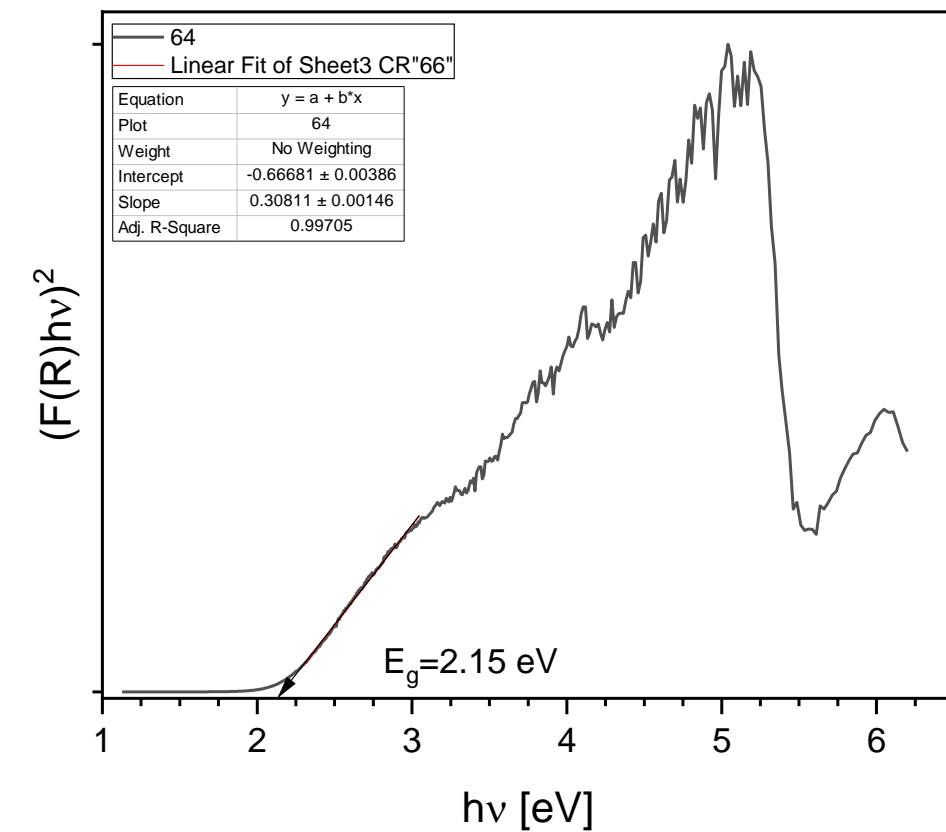
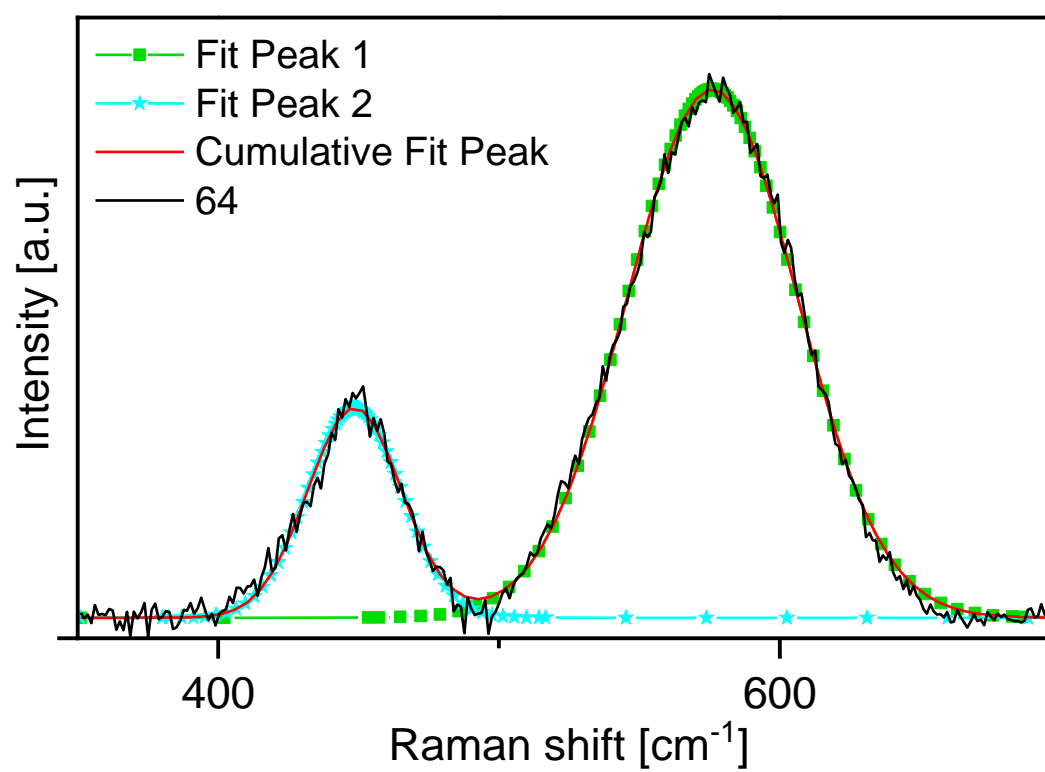
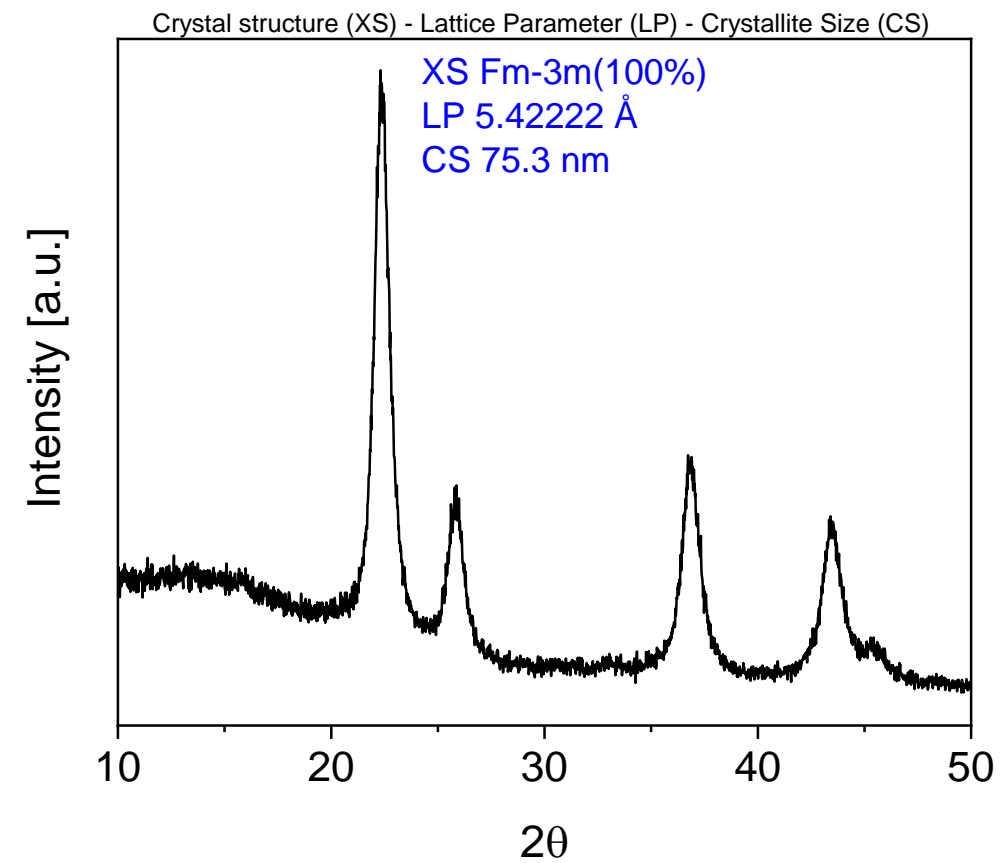
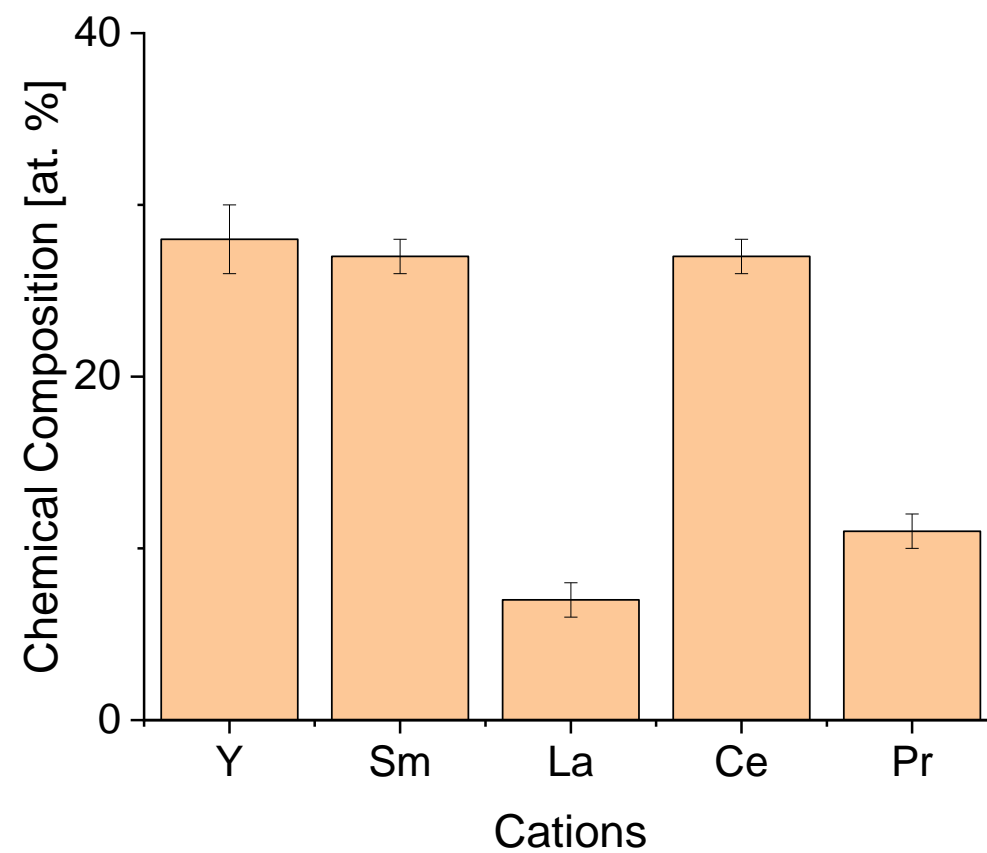




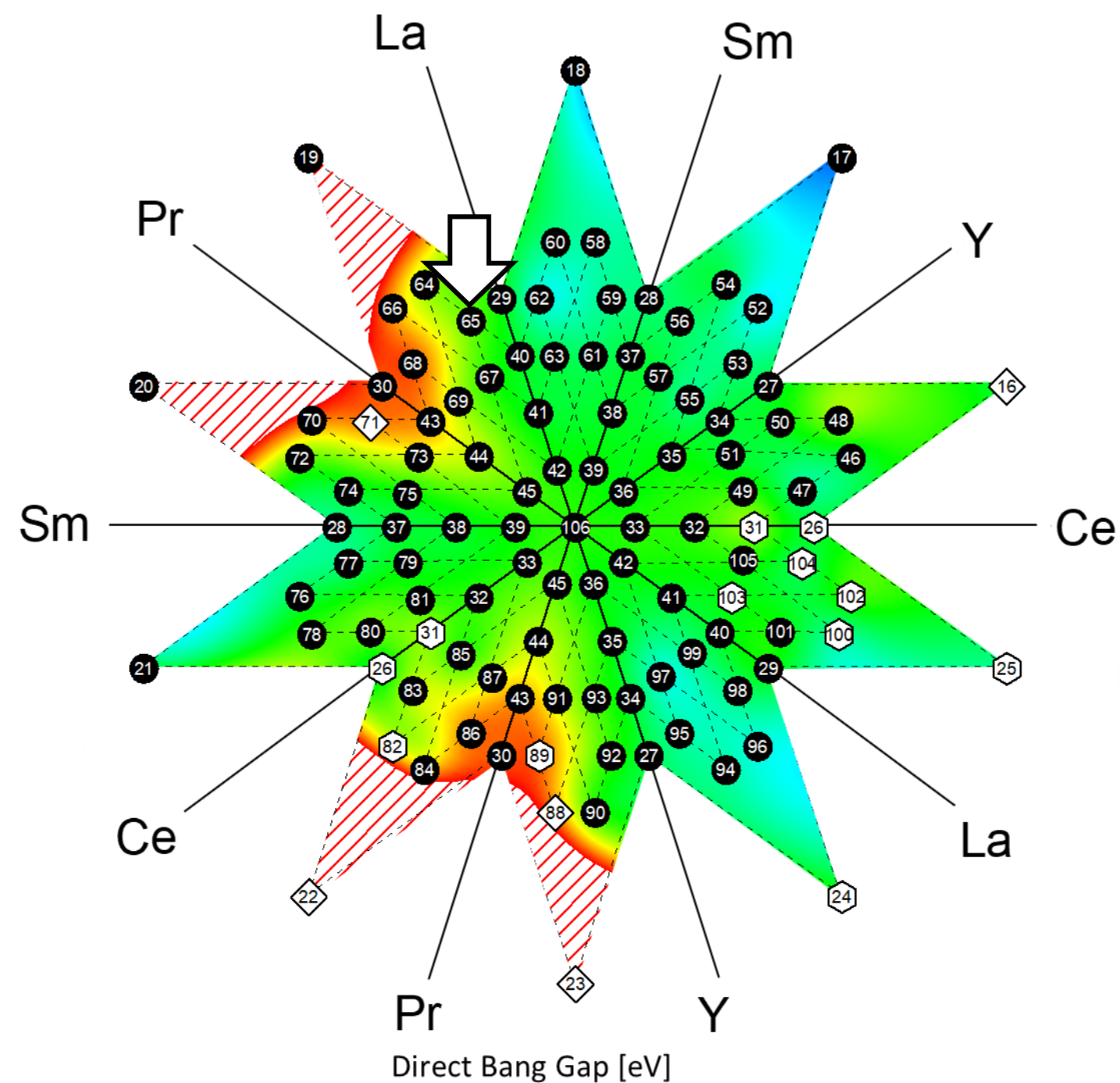
# Sample 64



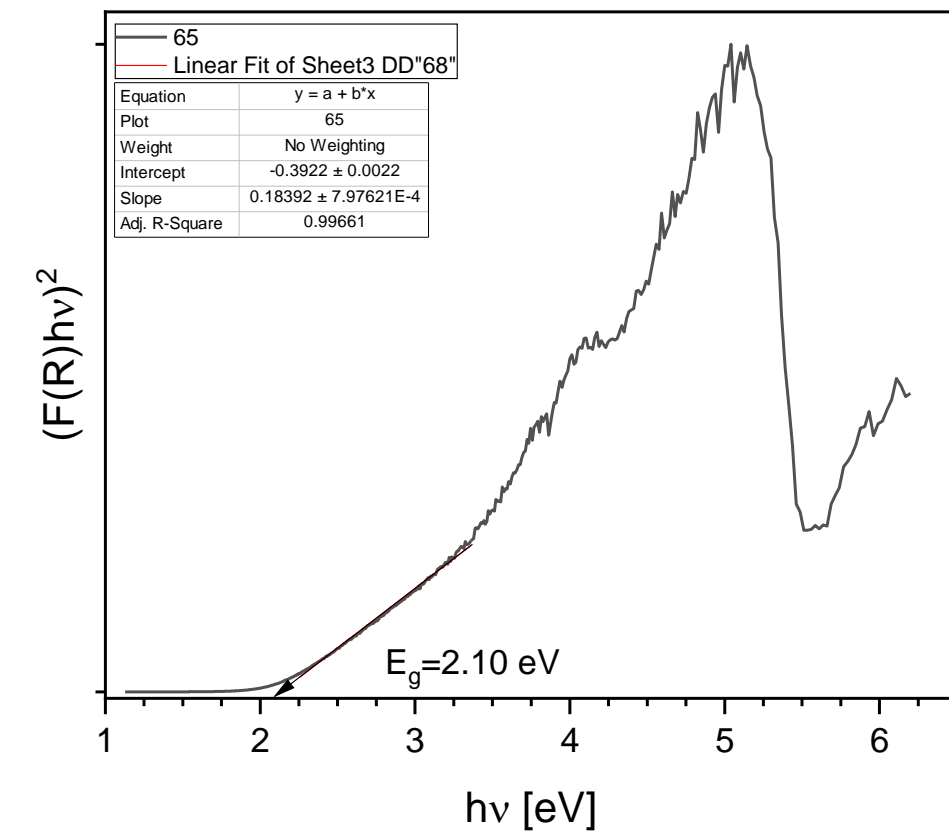
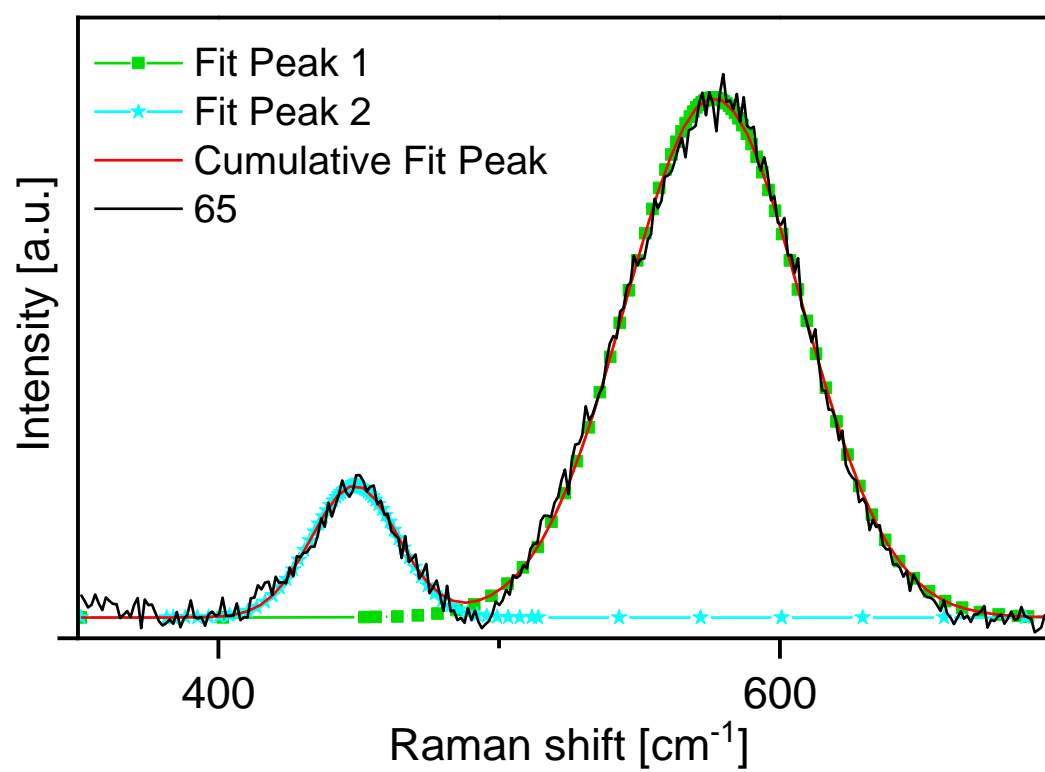
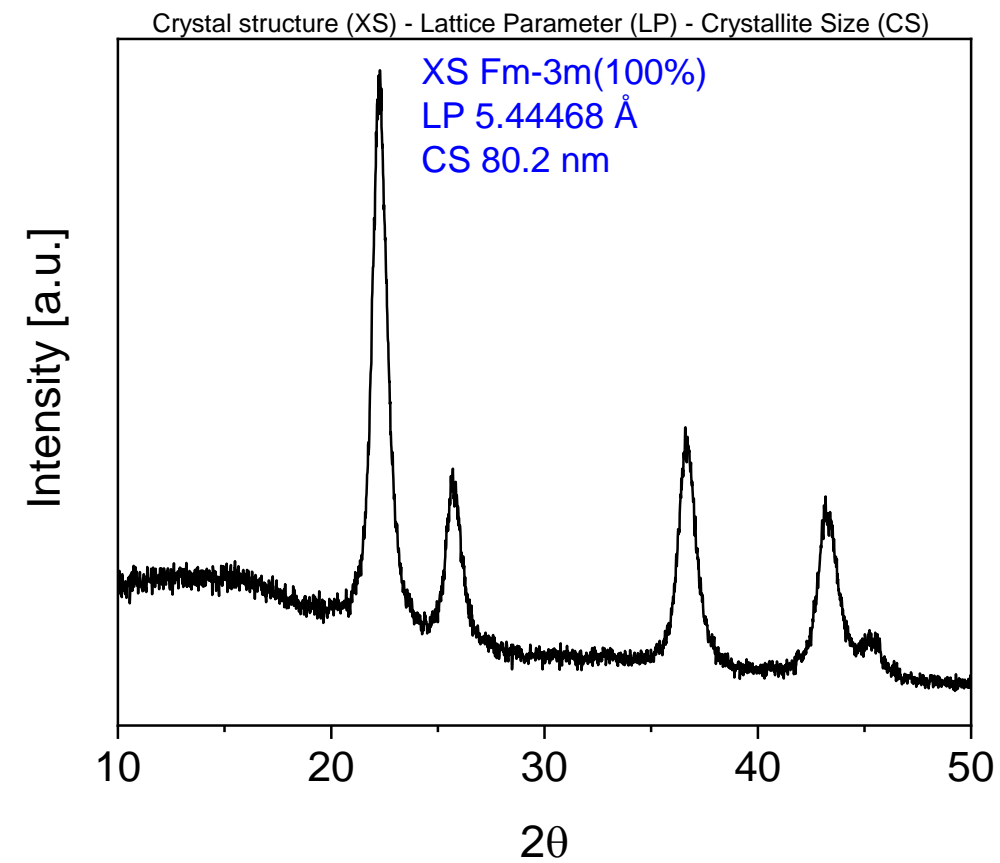
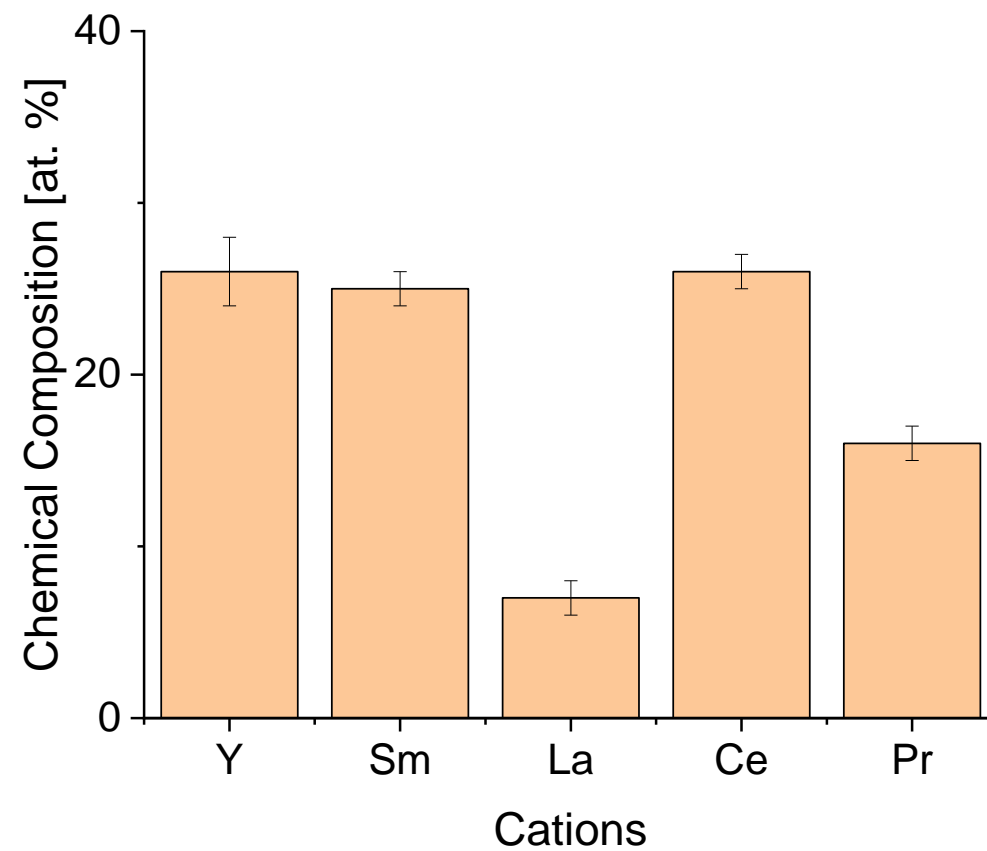
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



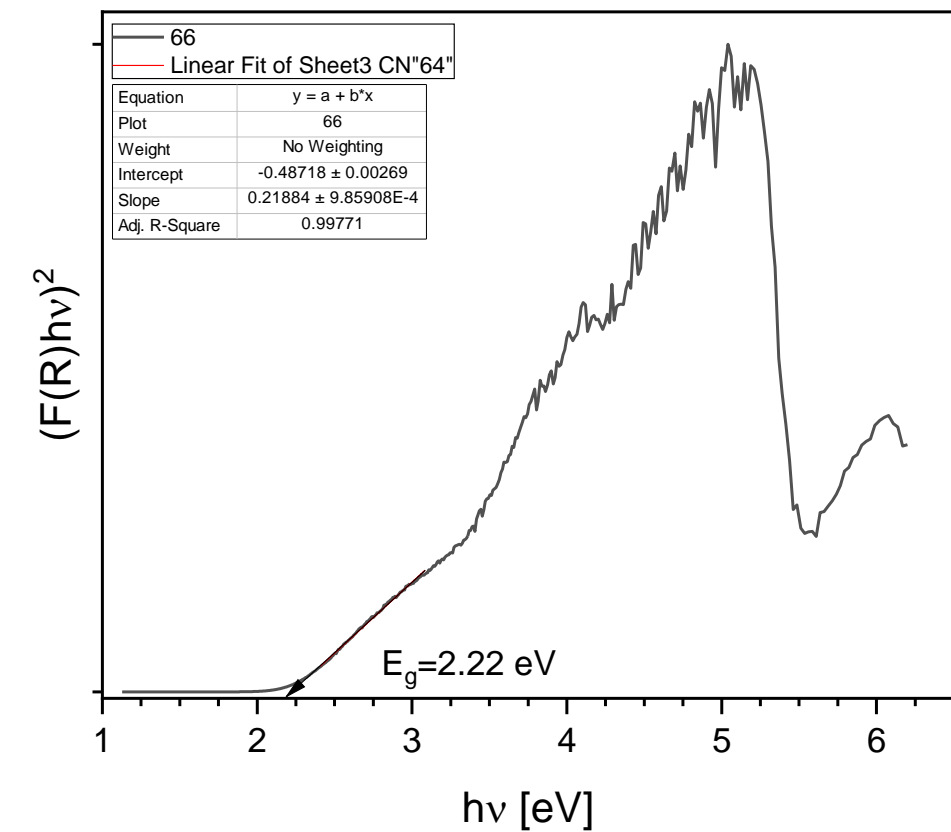
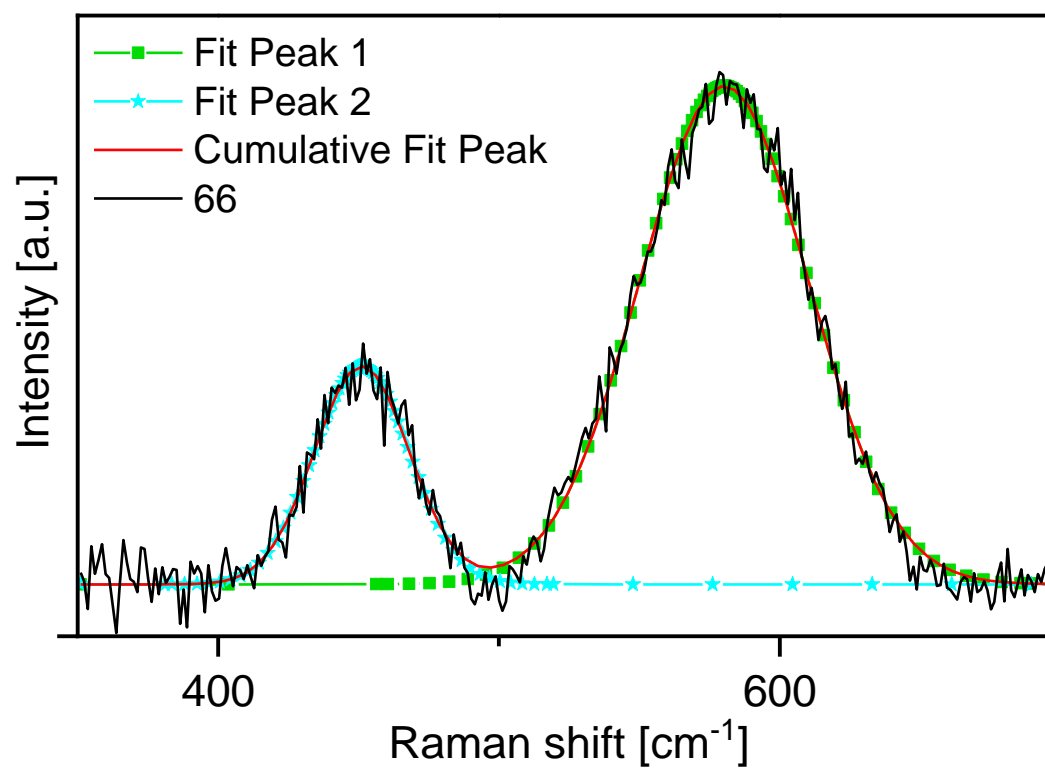
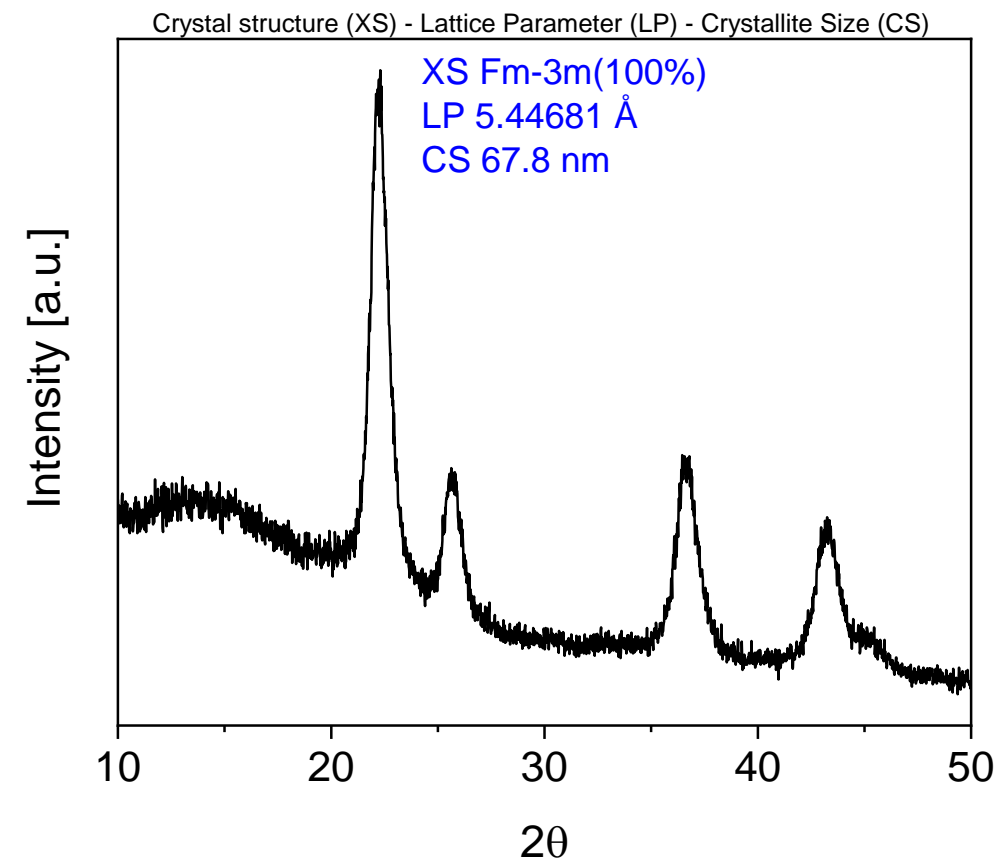
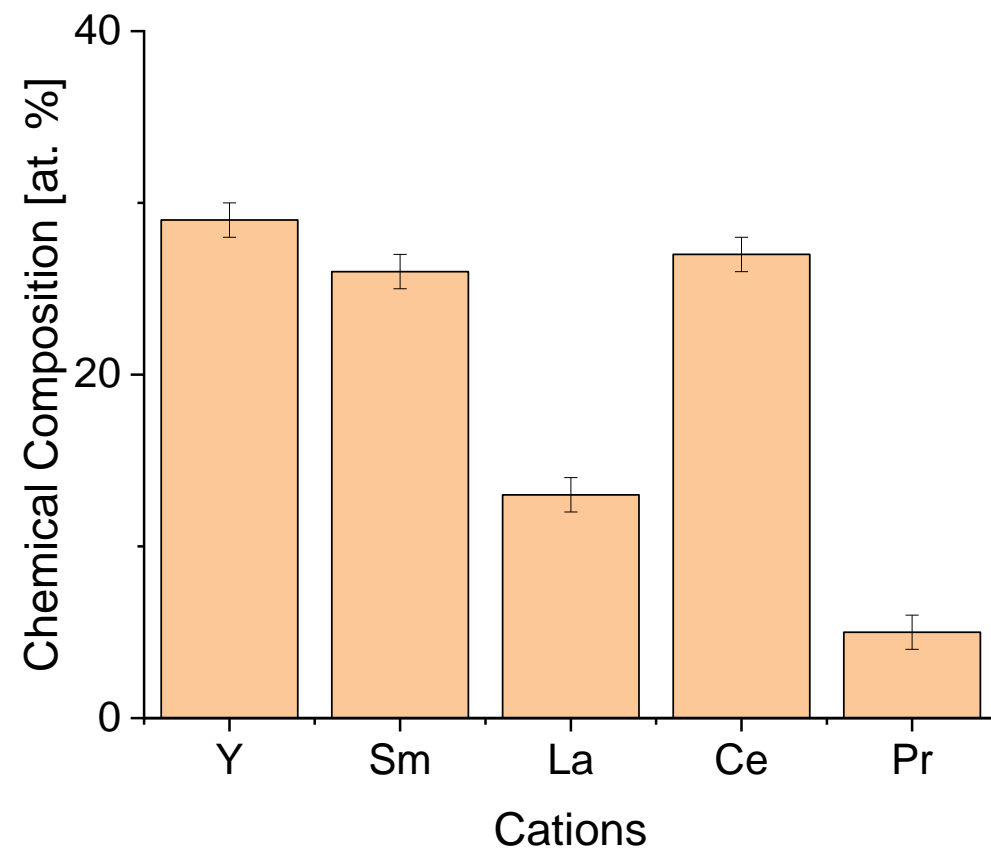
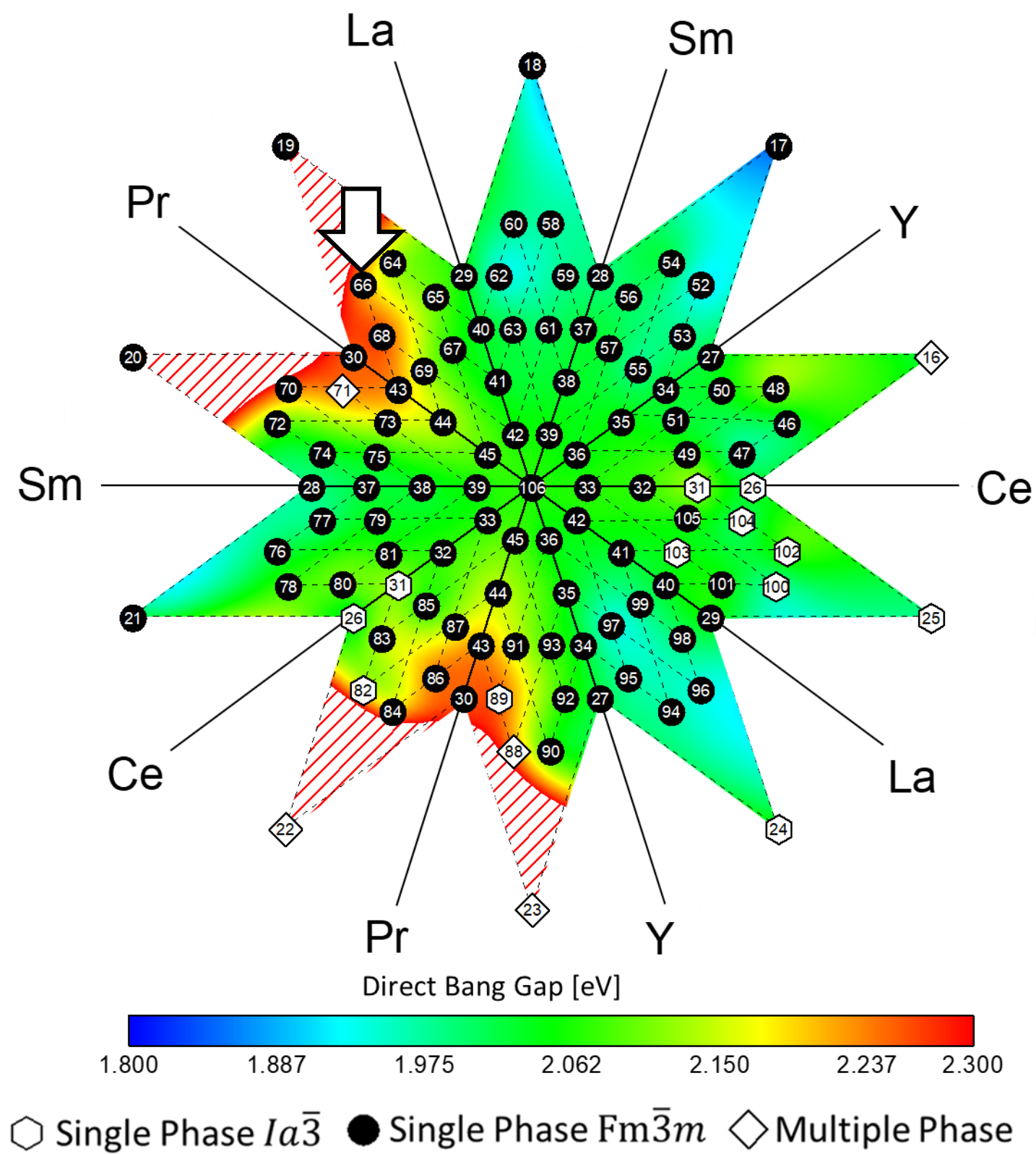
# Sample 65



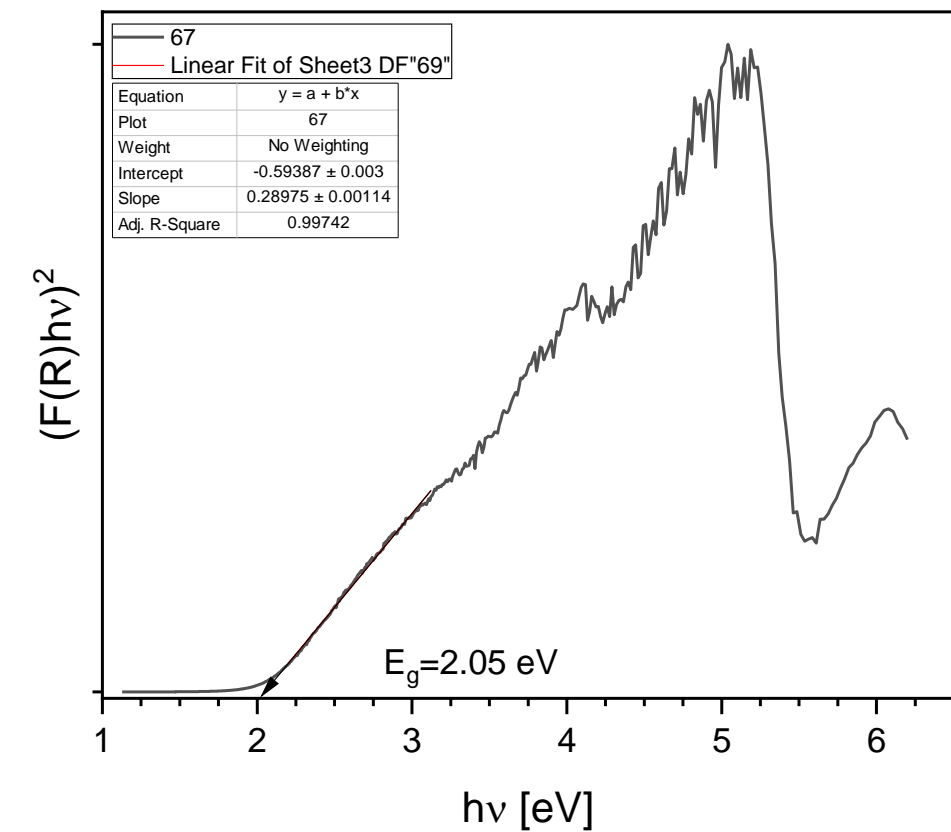
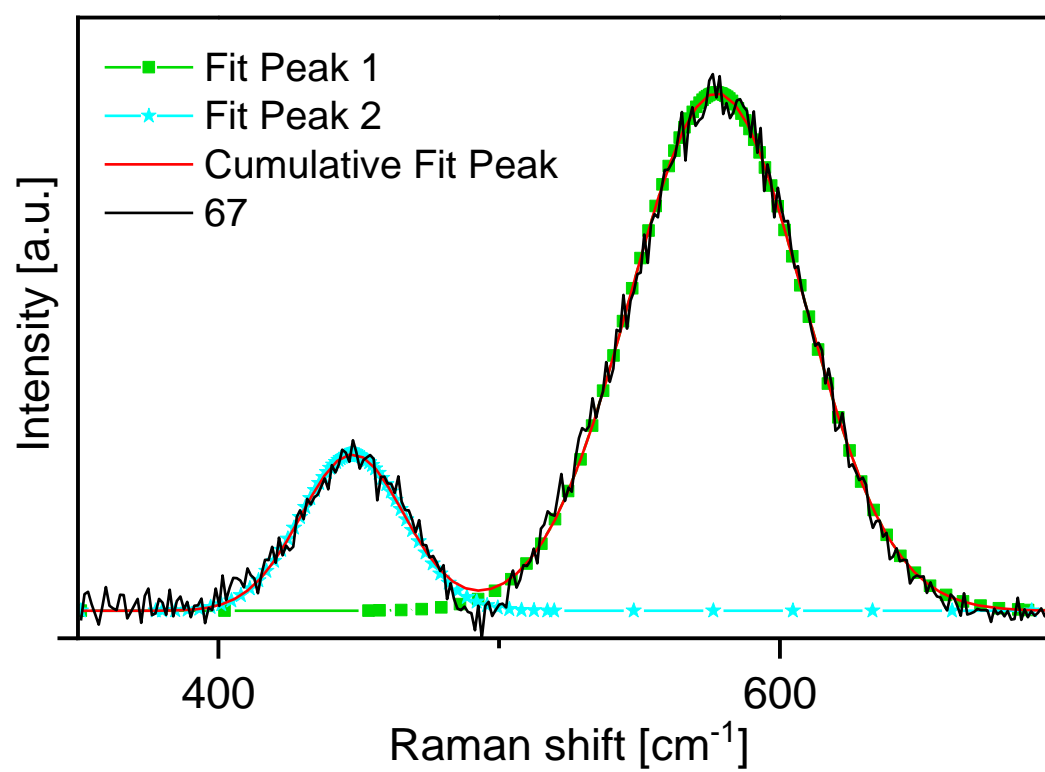
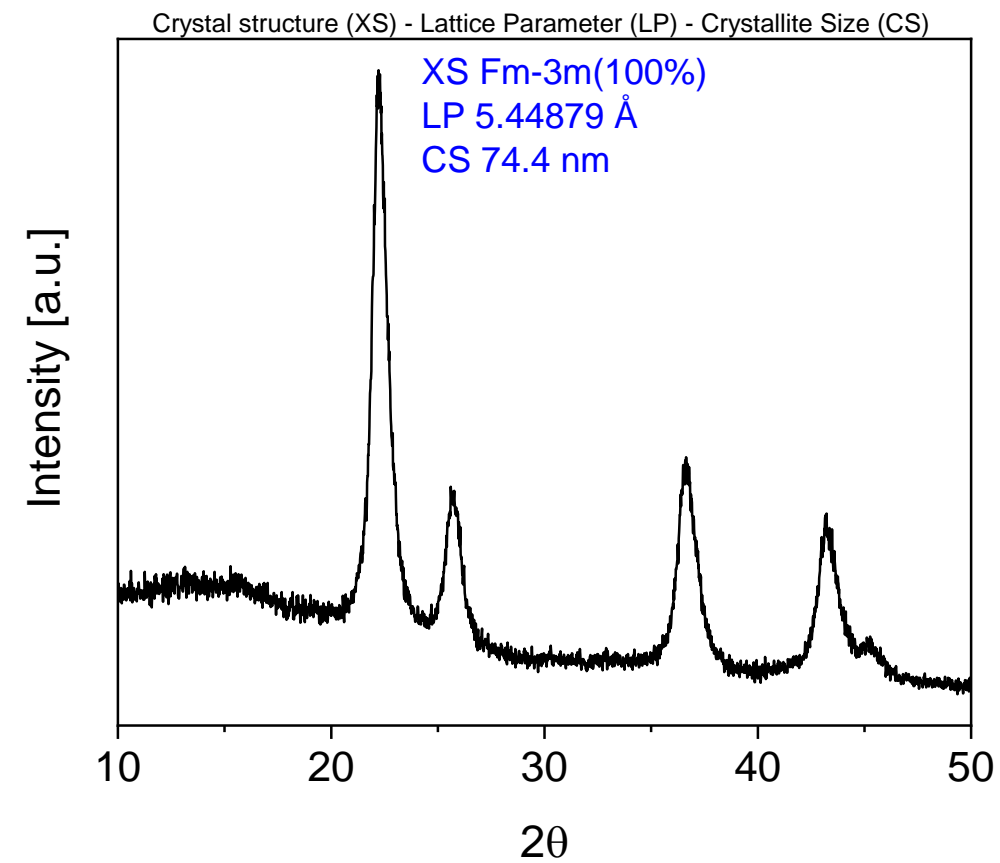
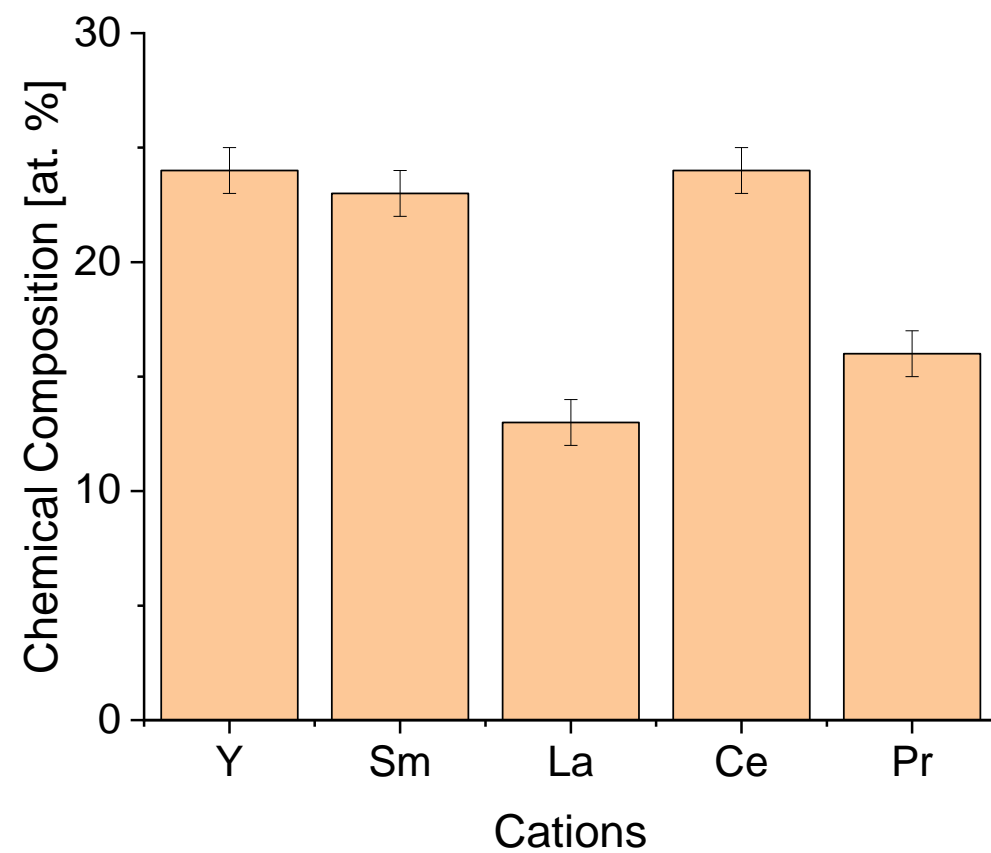
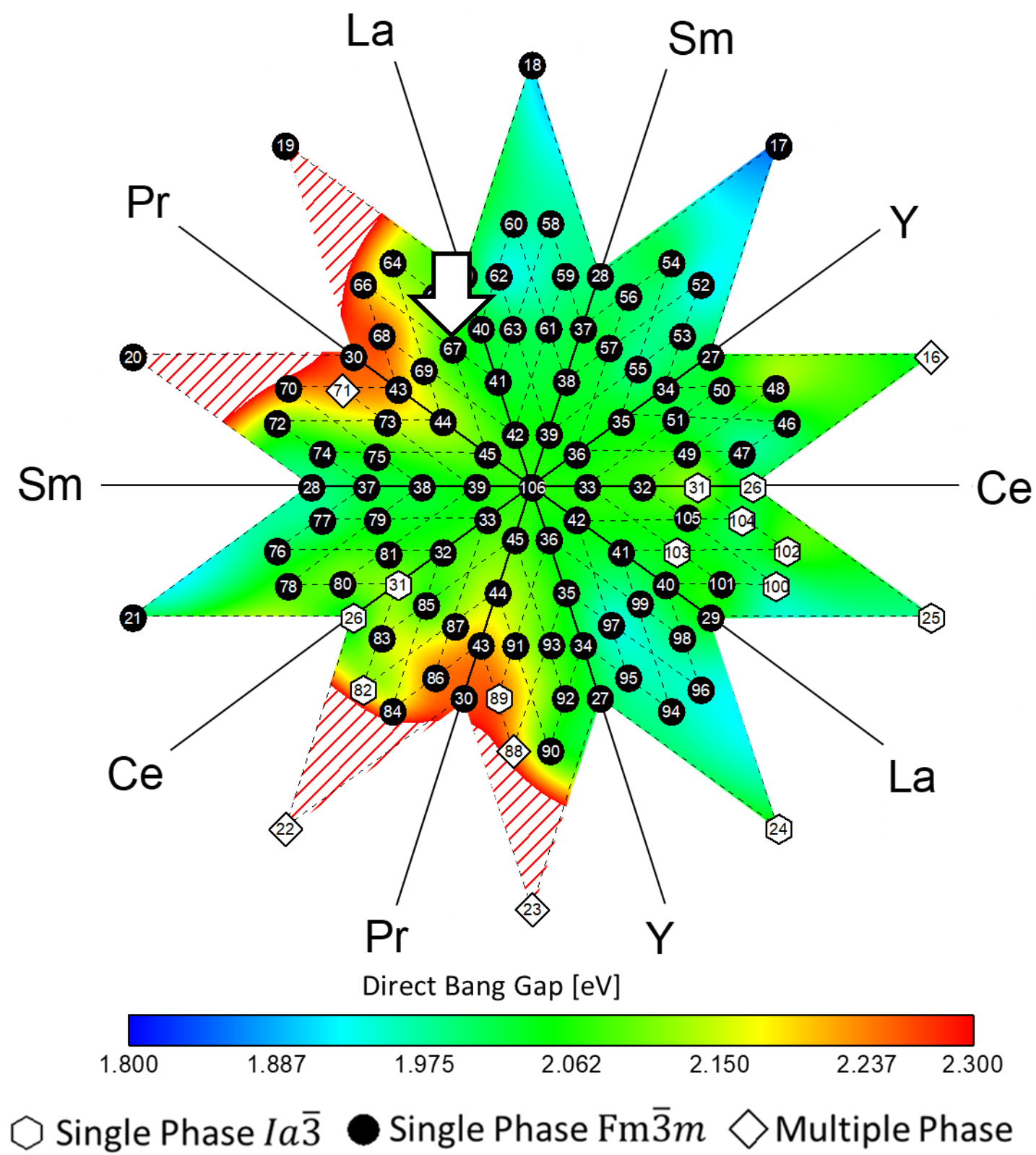
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



# Sample 66

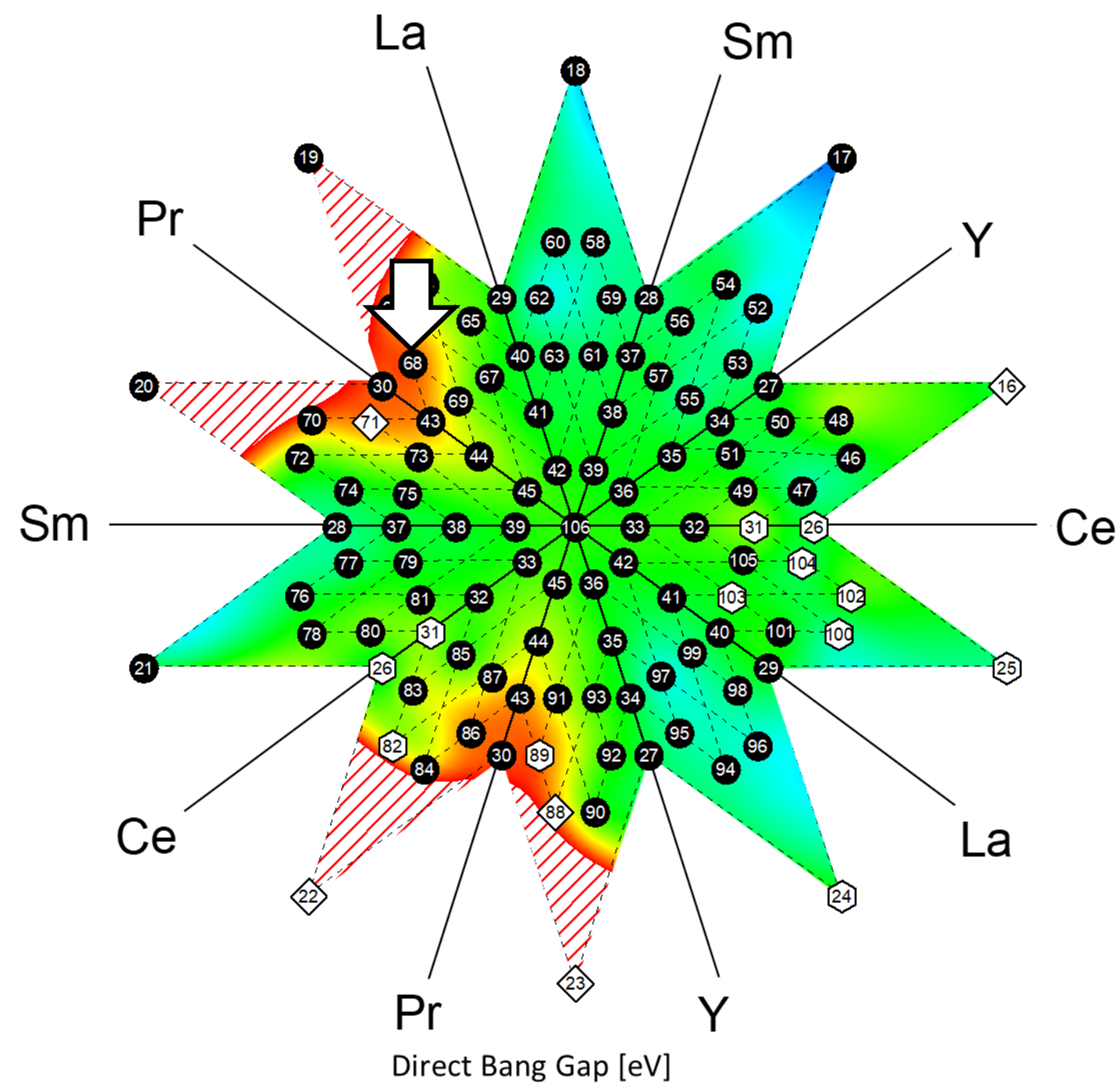


# Sample 67

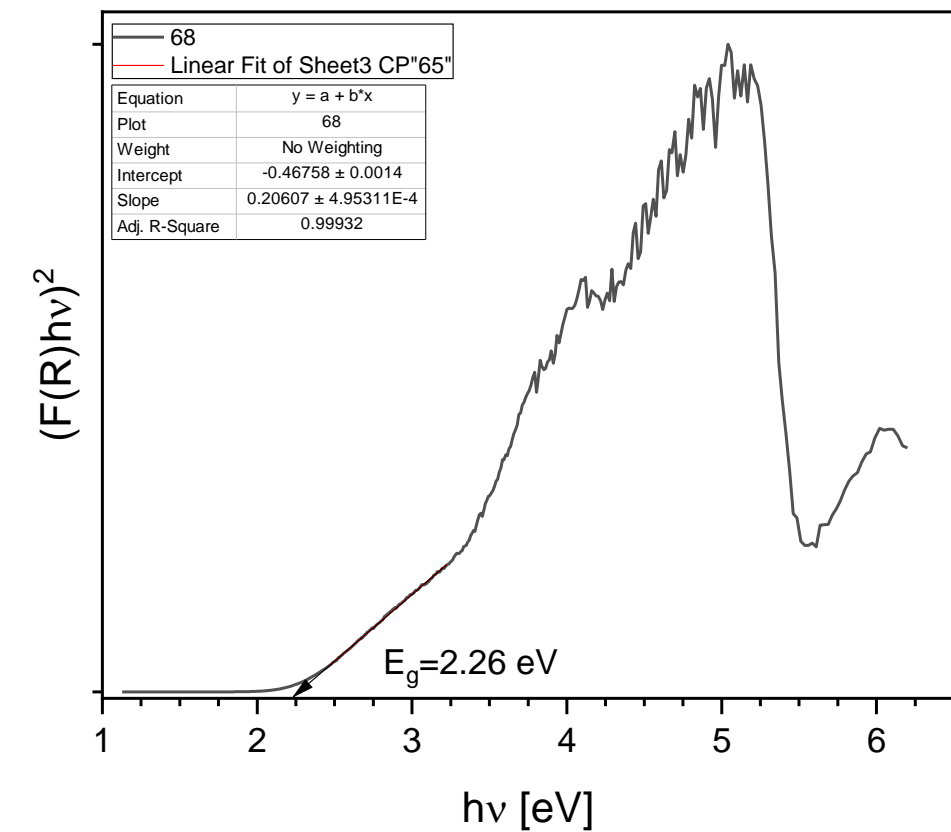
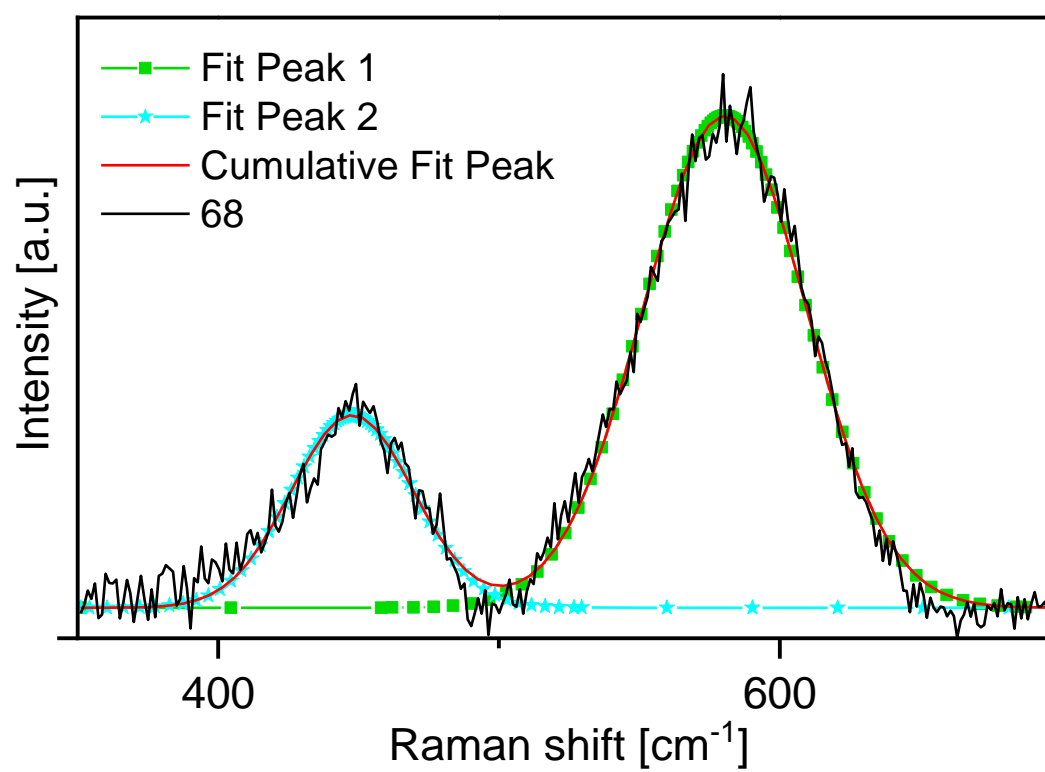
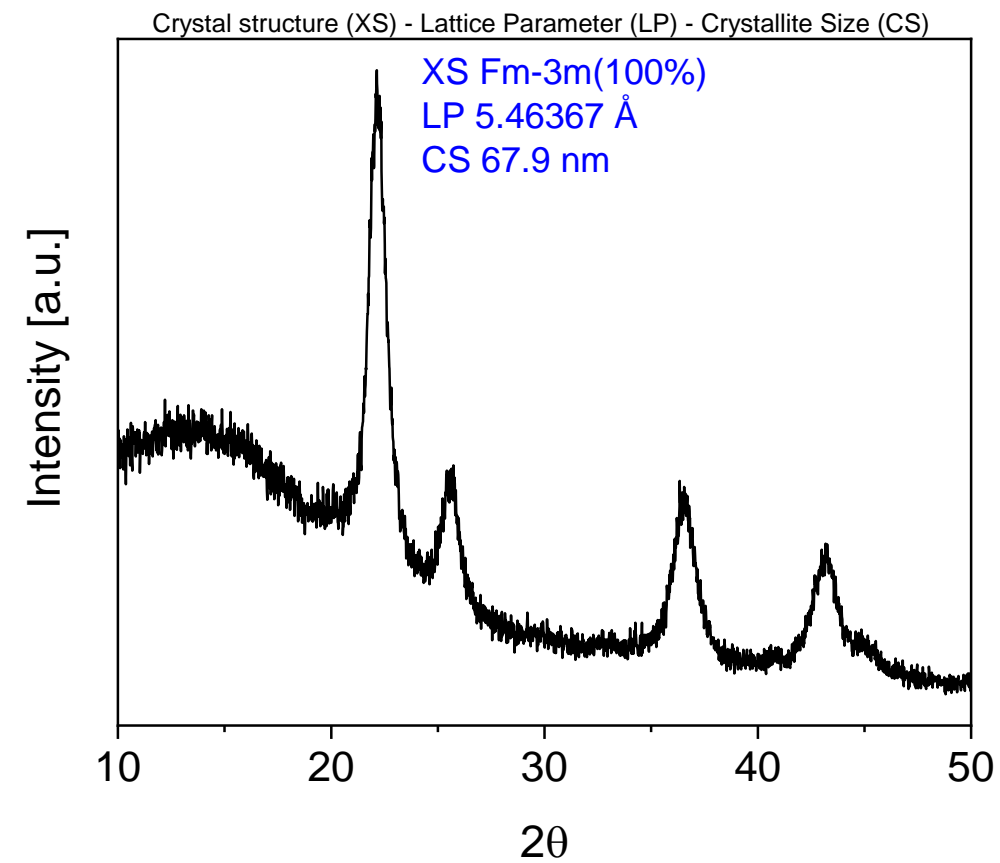
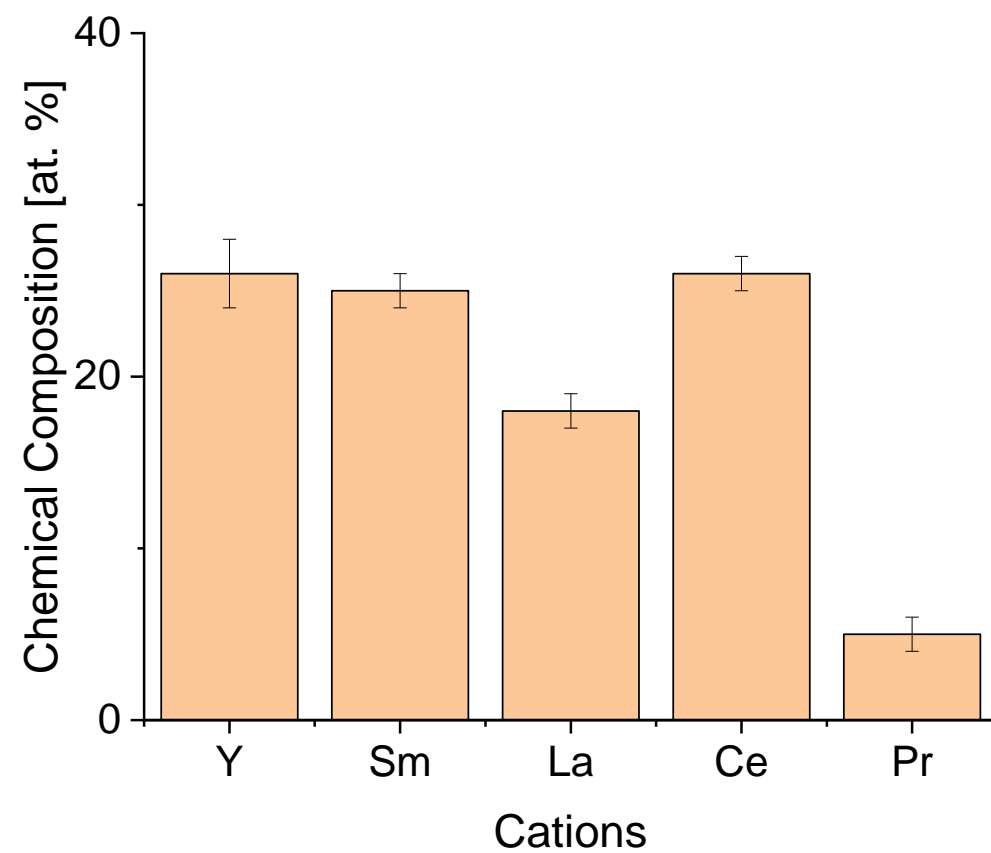




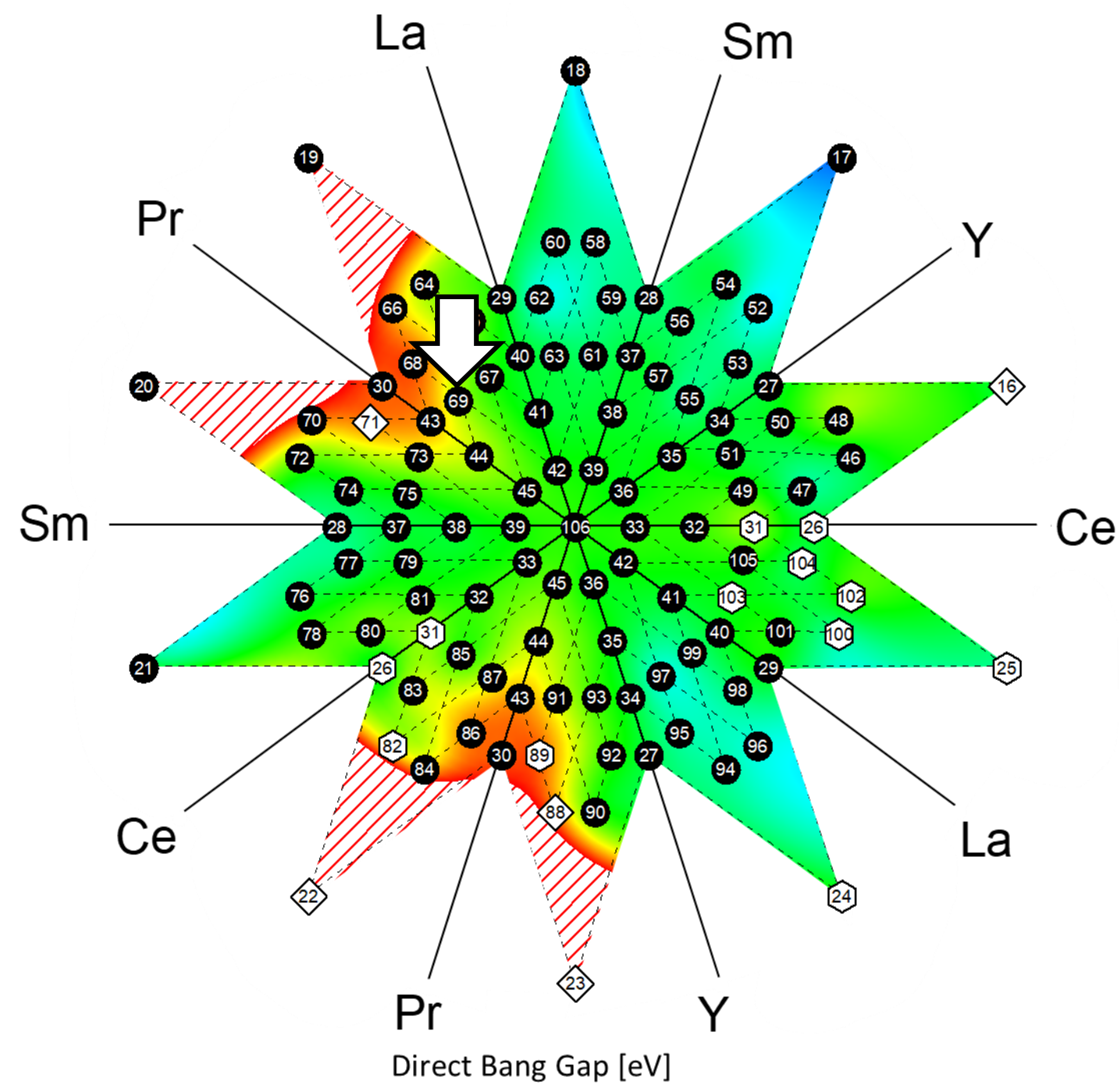
# Sample 68



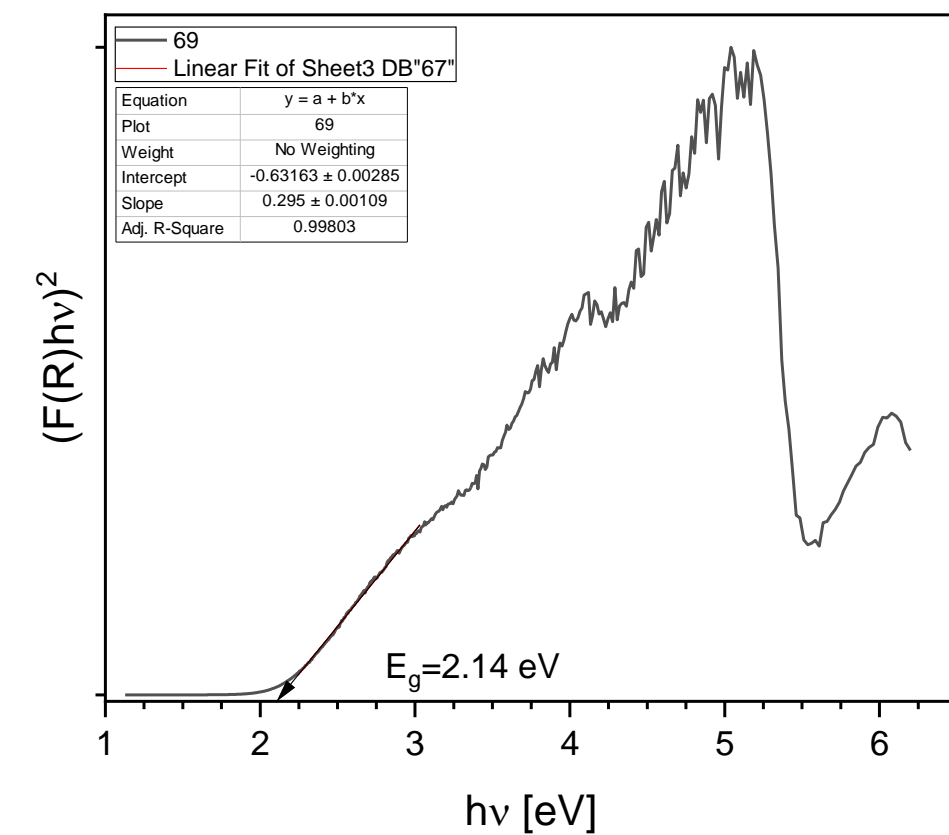
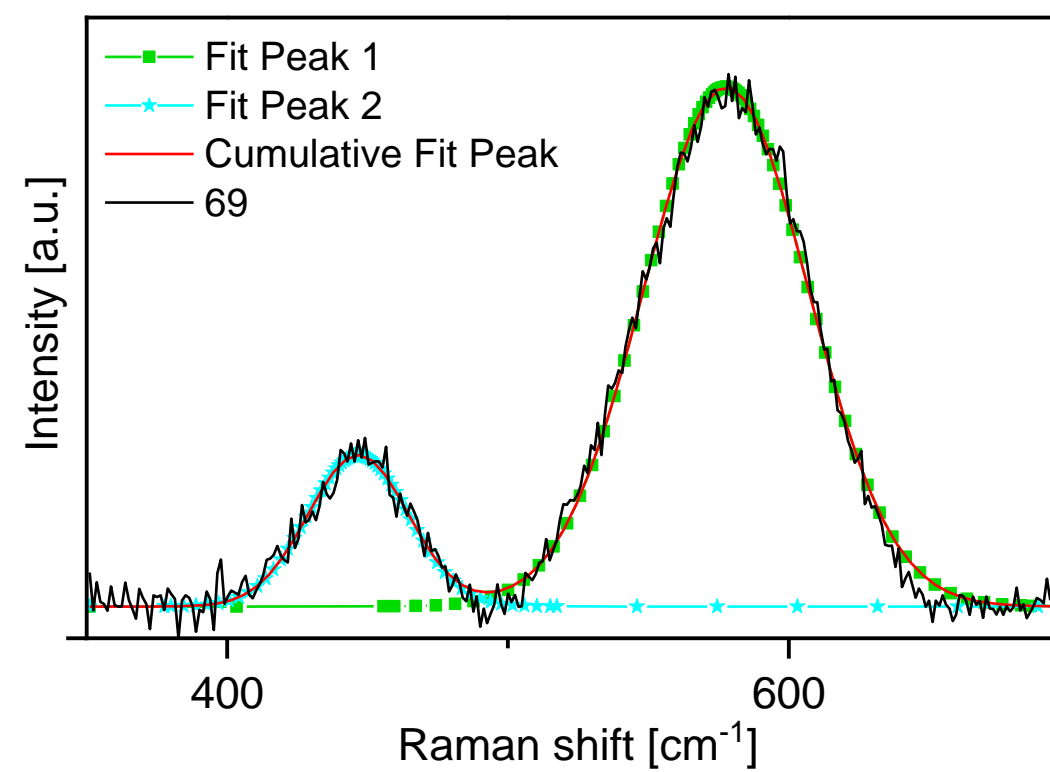
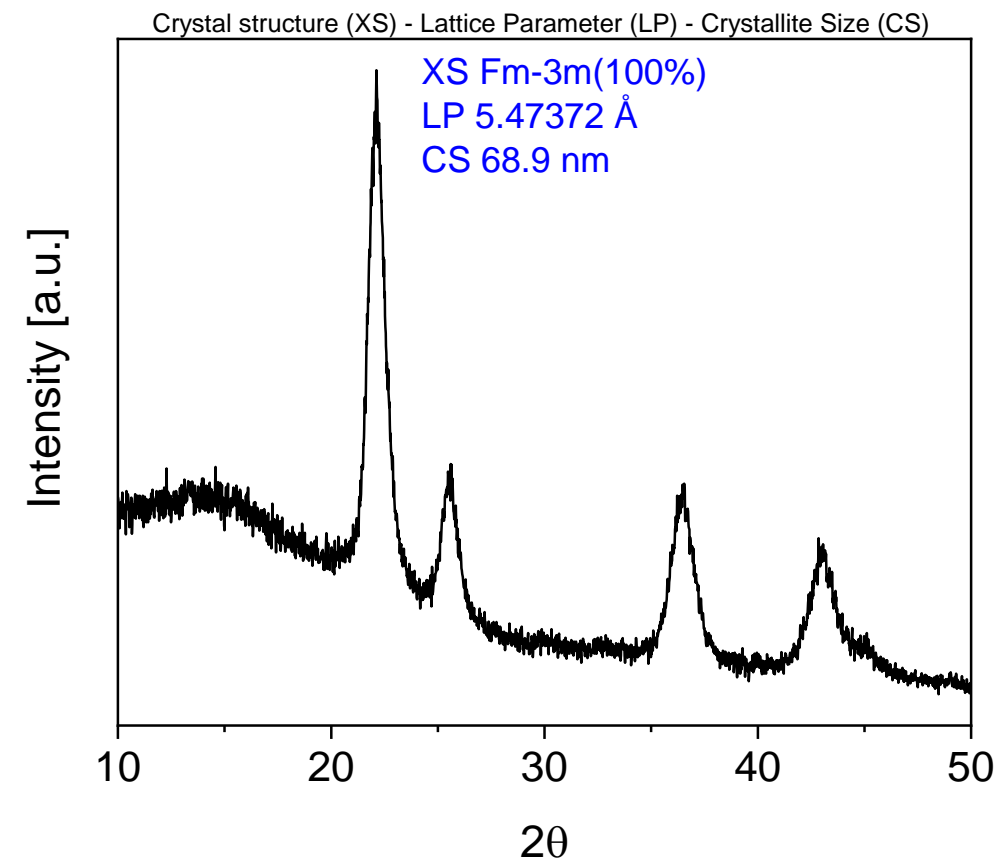
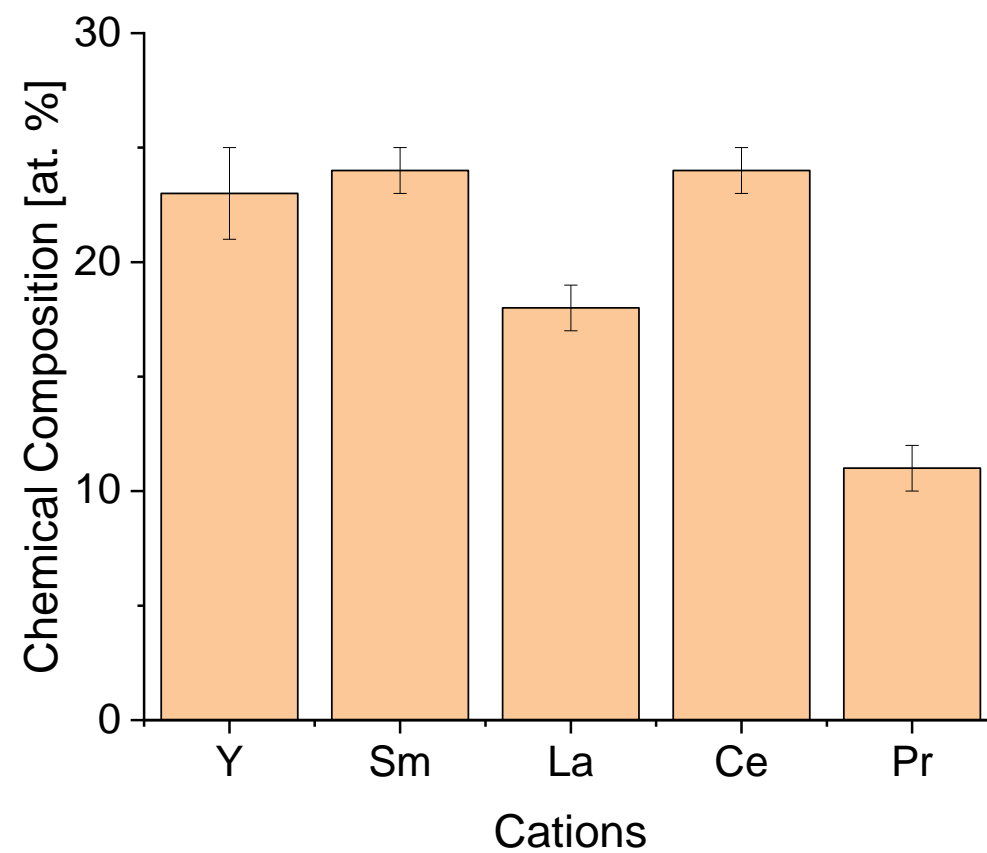
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



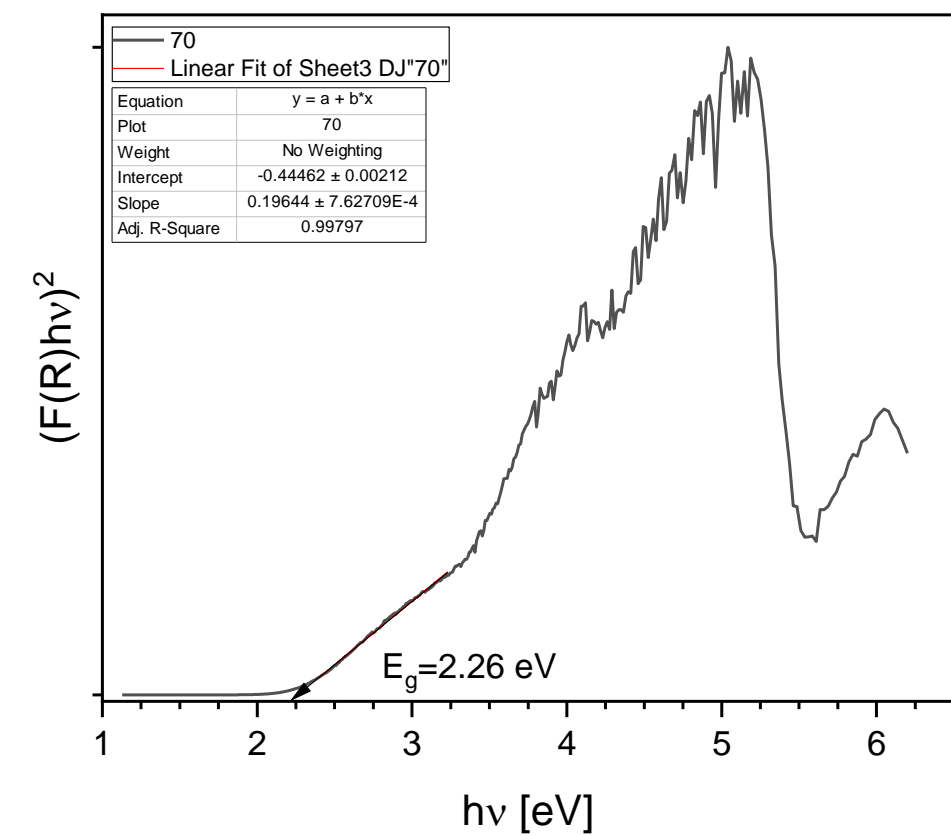
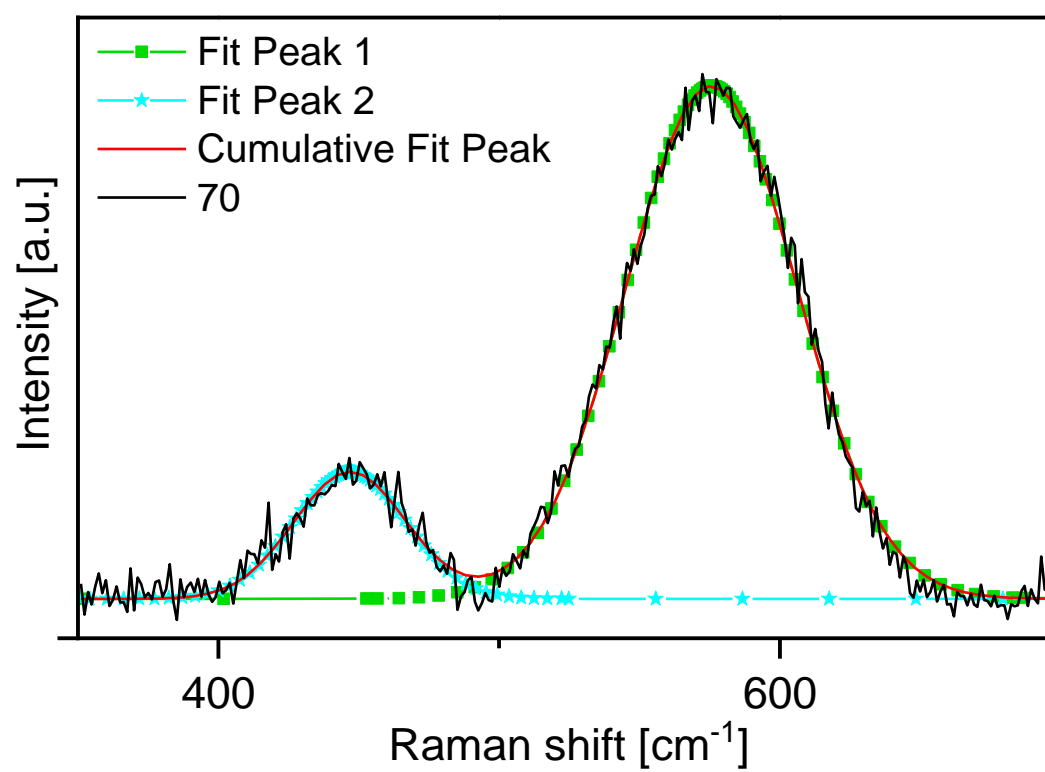
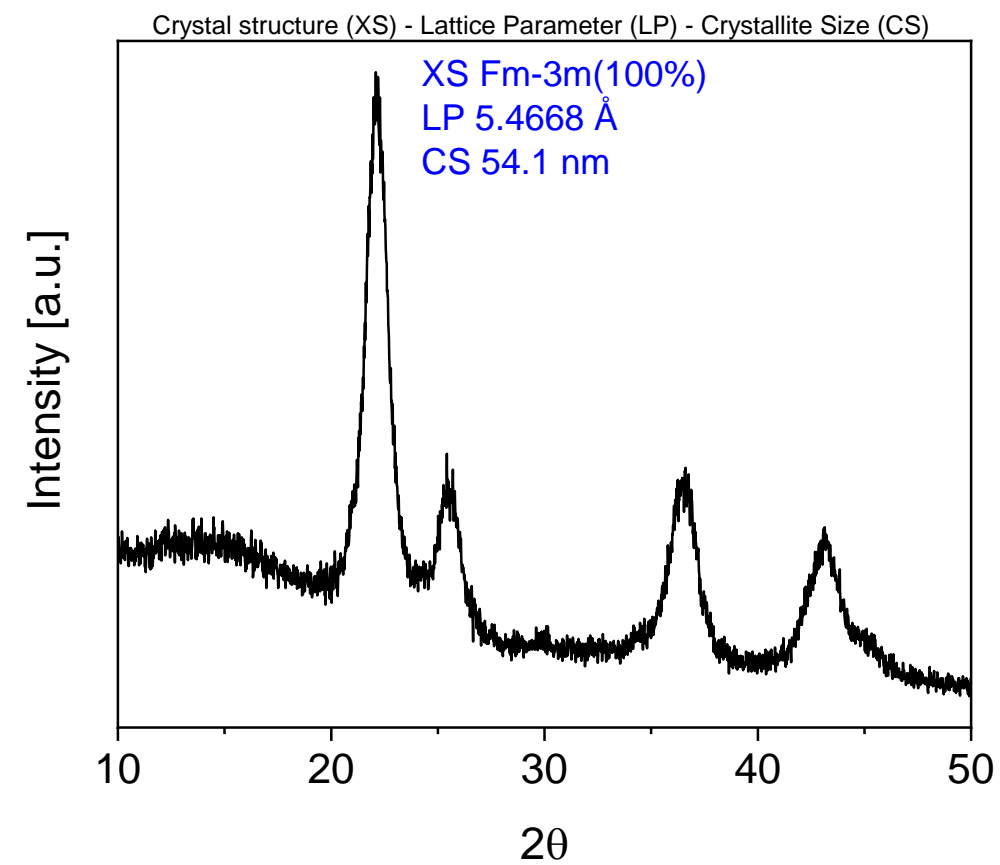
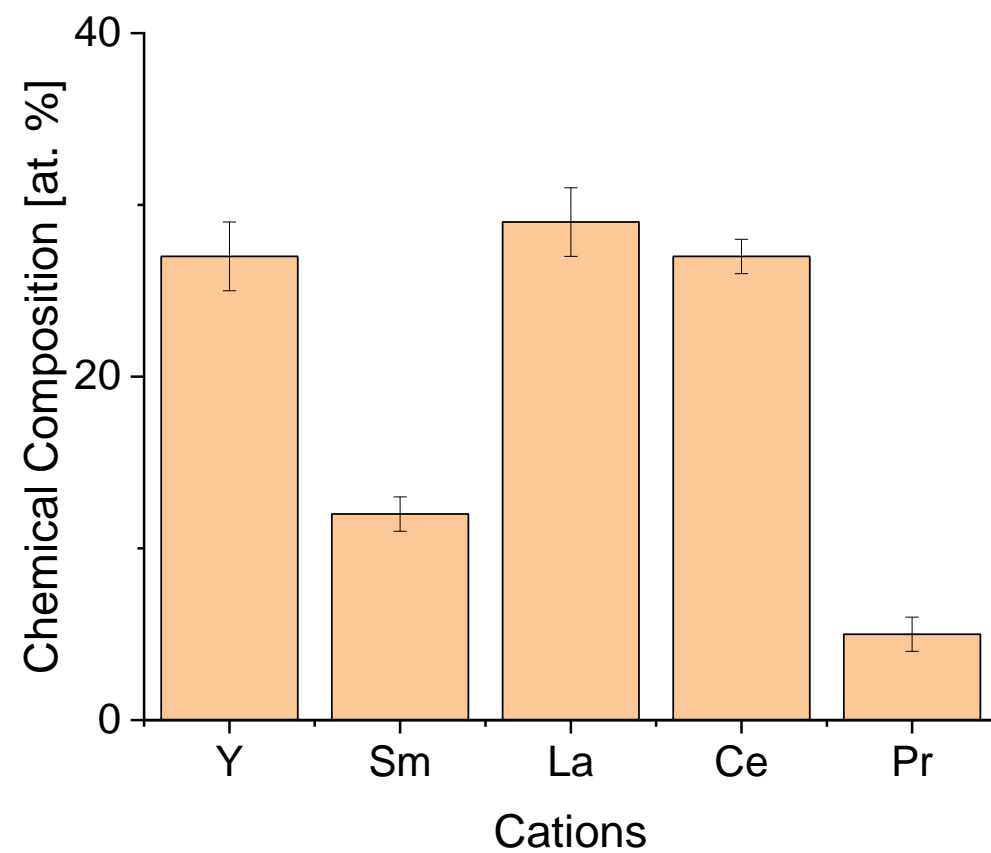
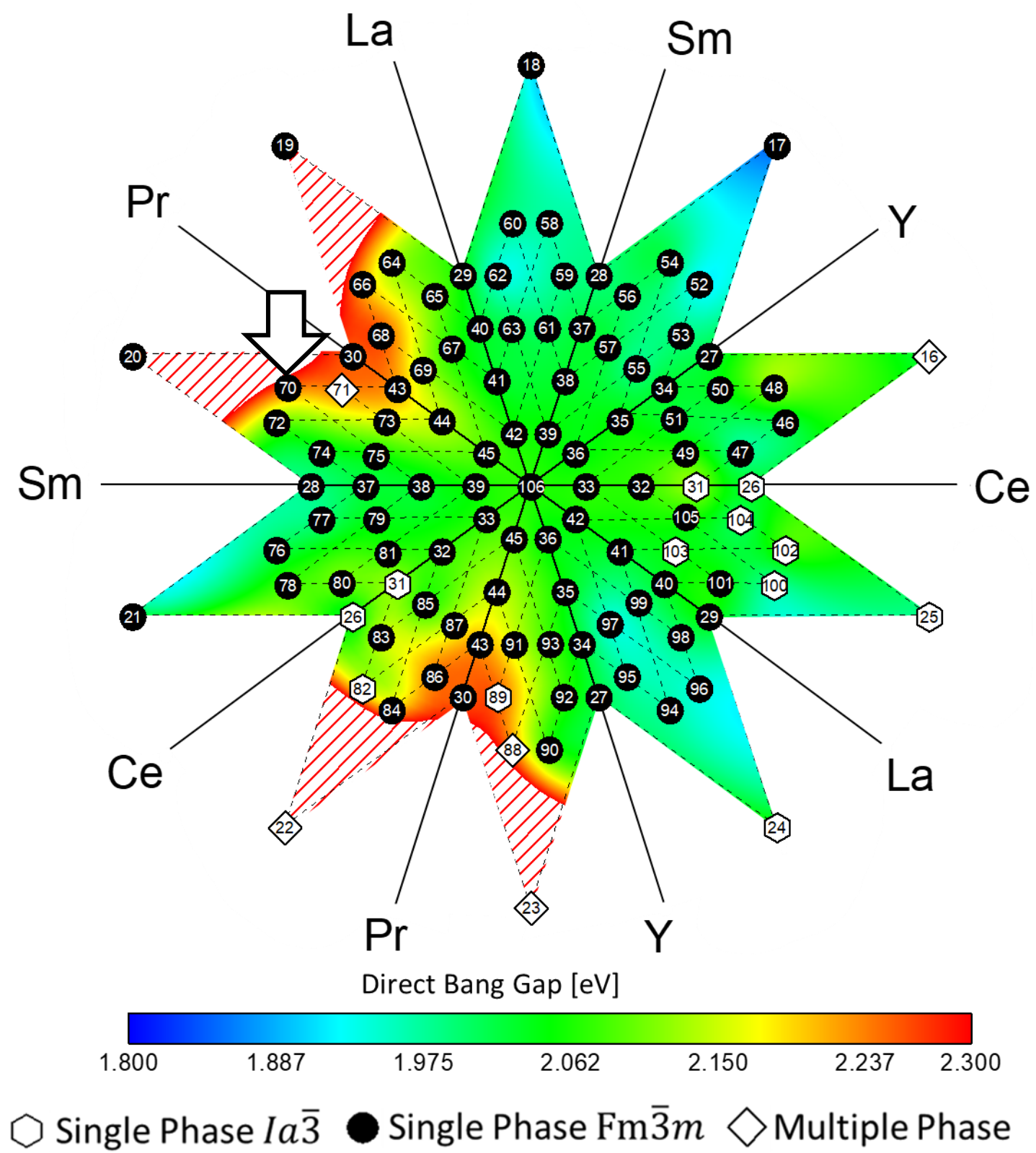
# Sample 69



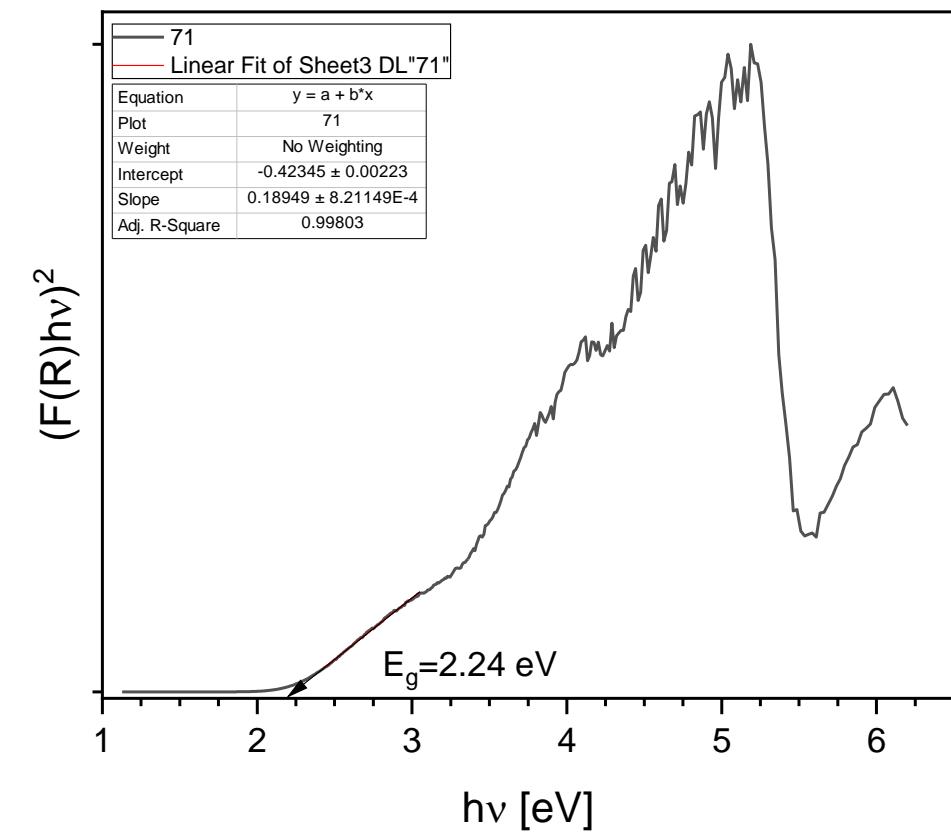
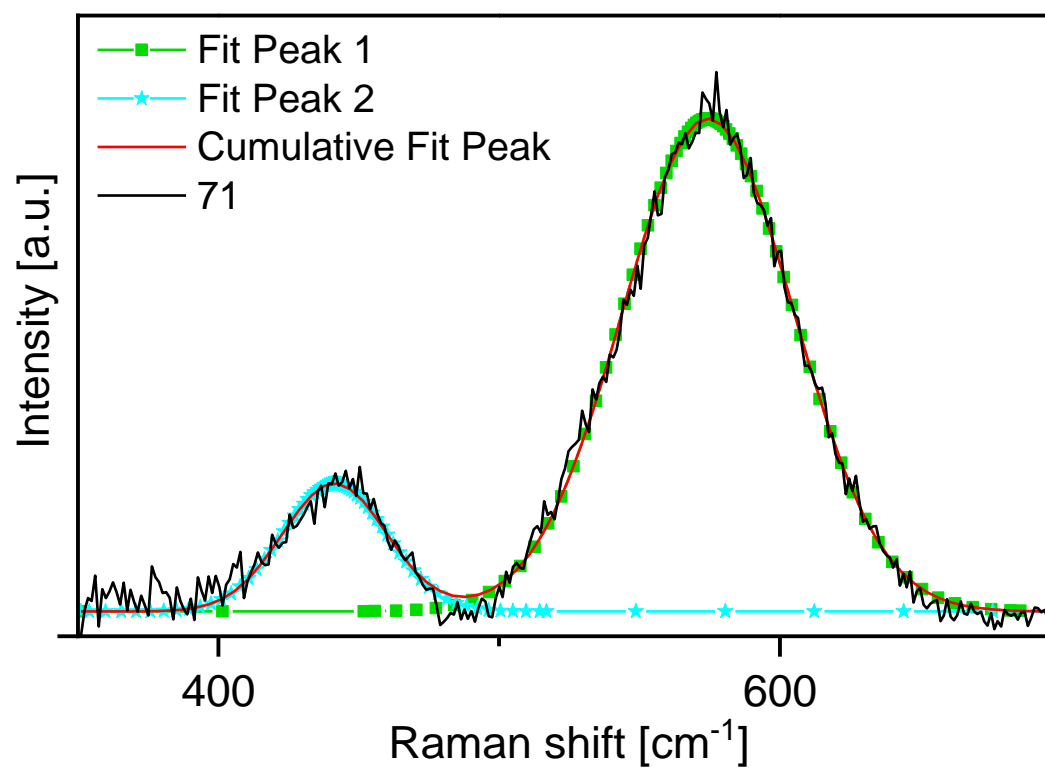
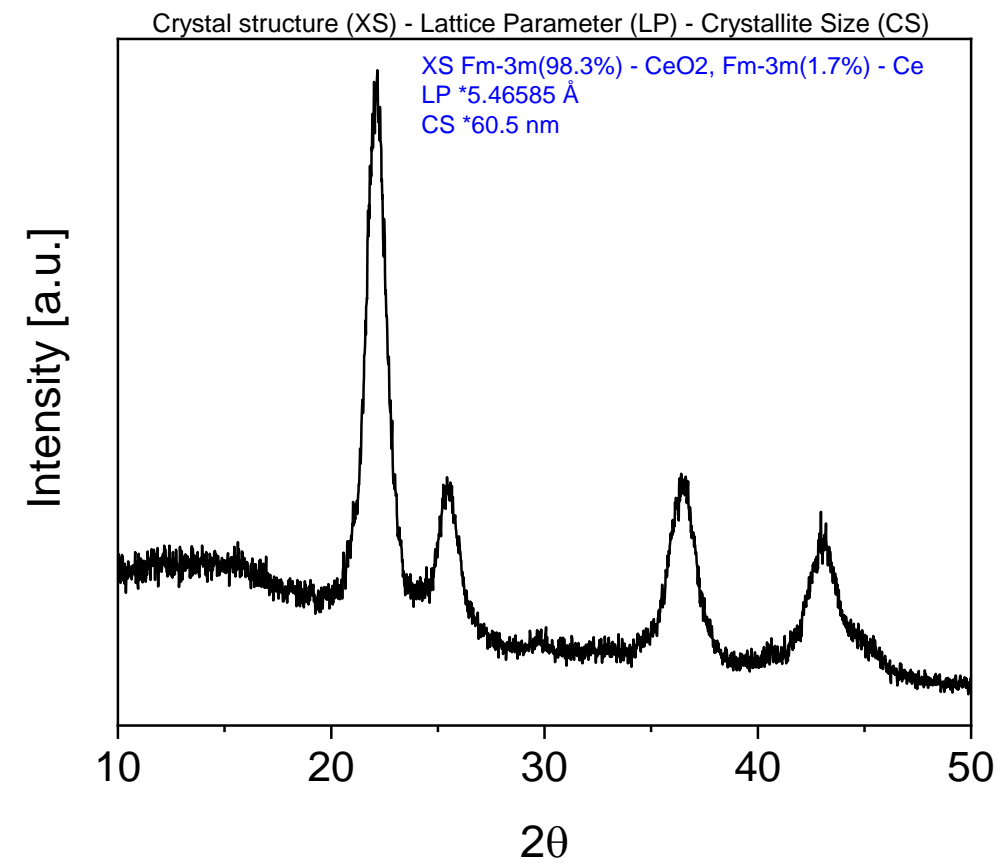
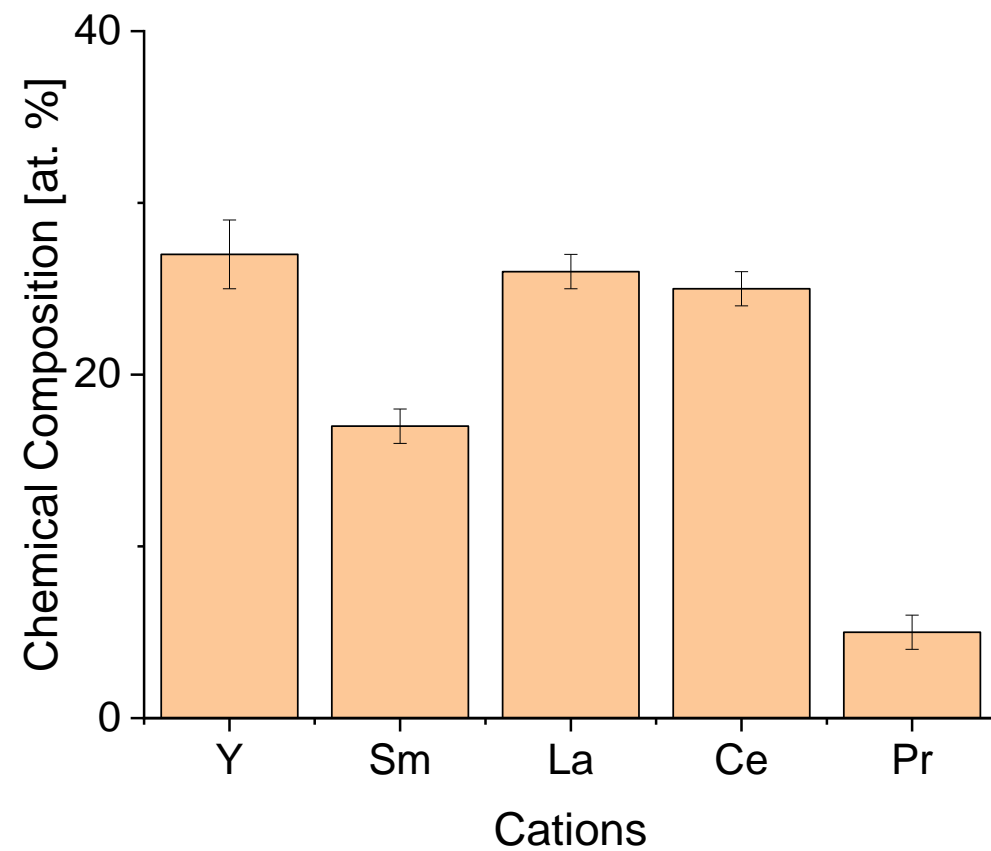
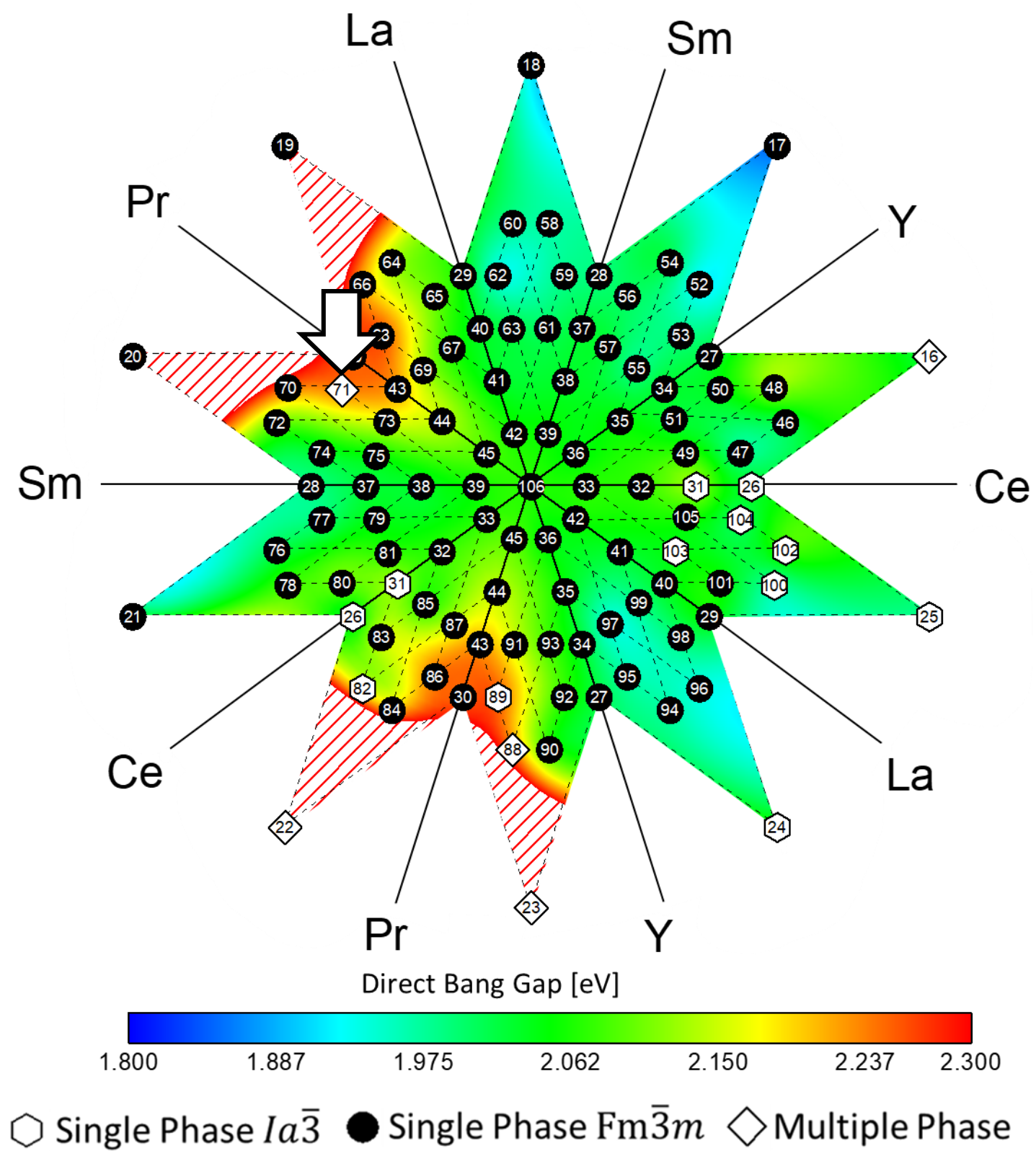
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



# Sample 70

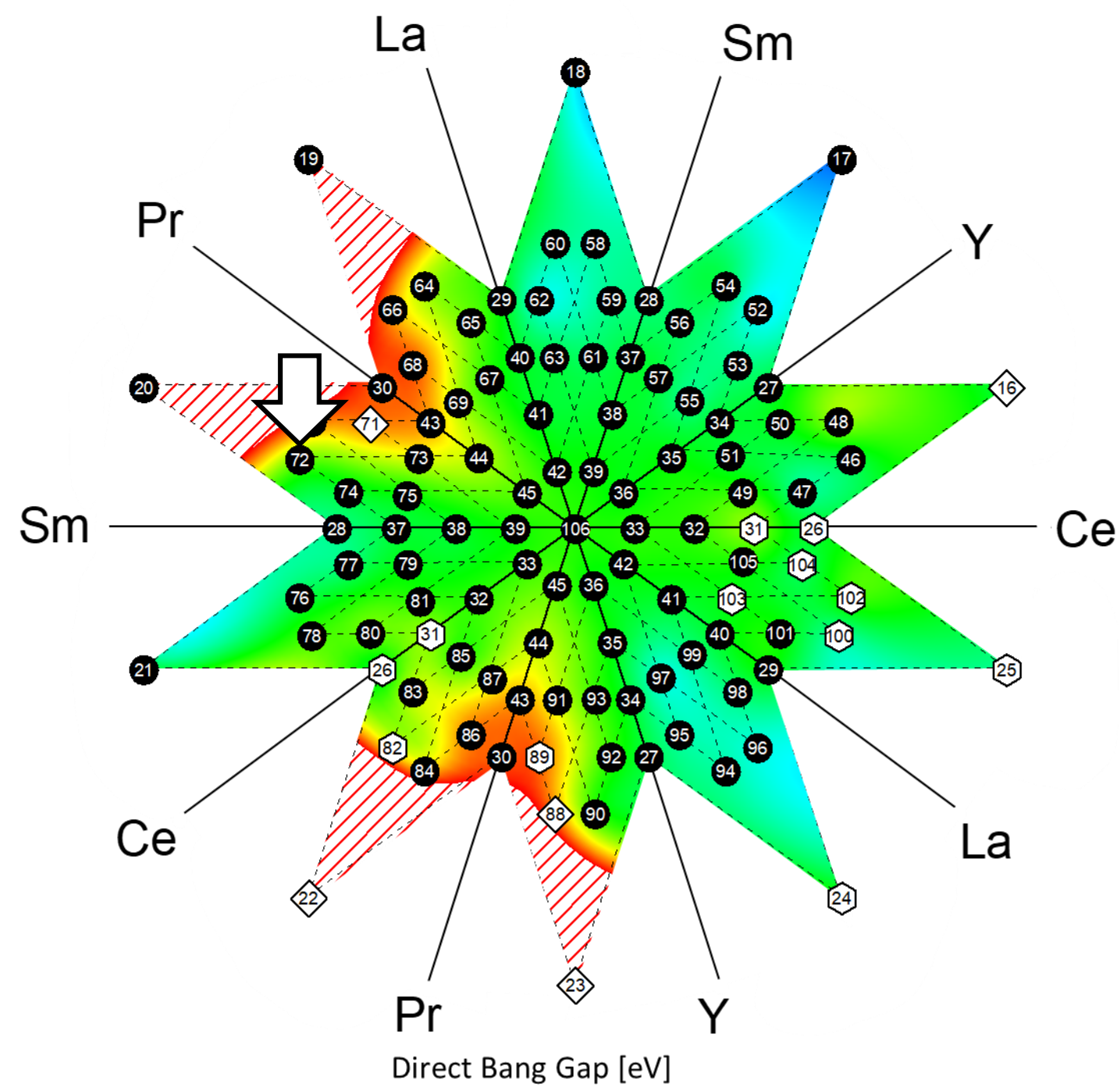


# Sample 71

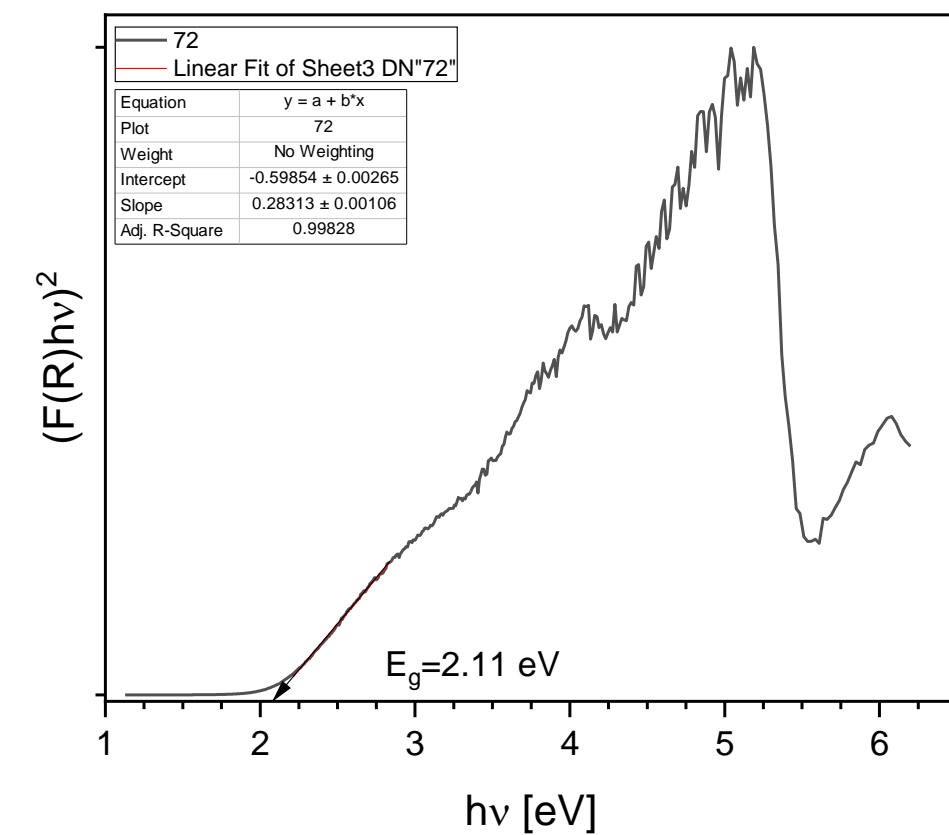
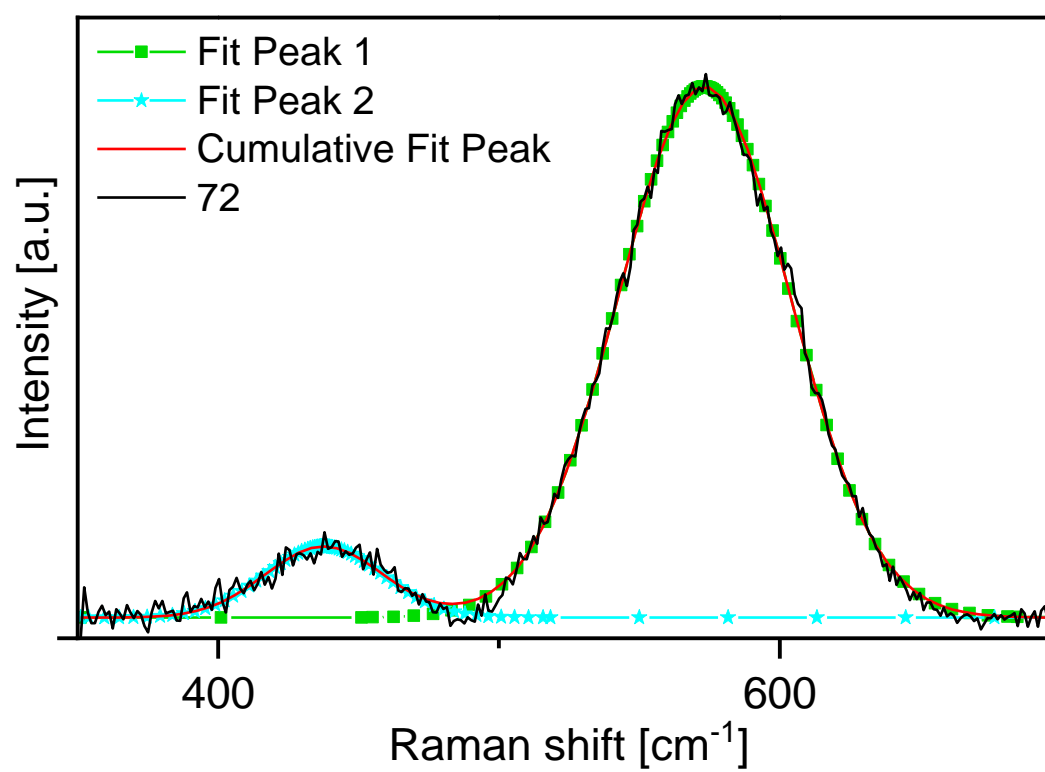
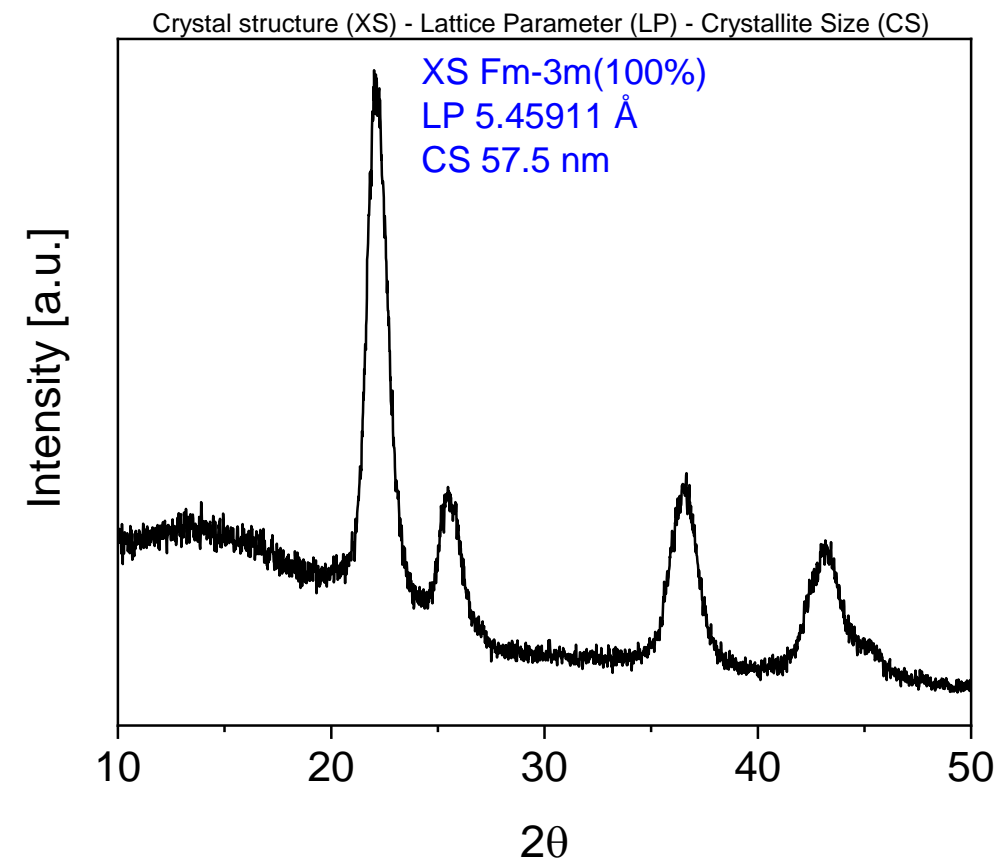
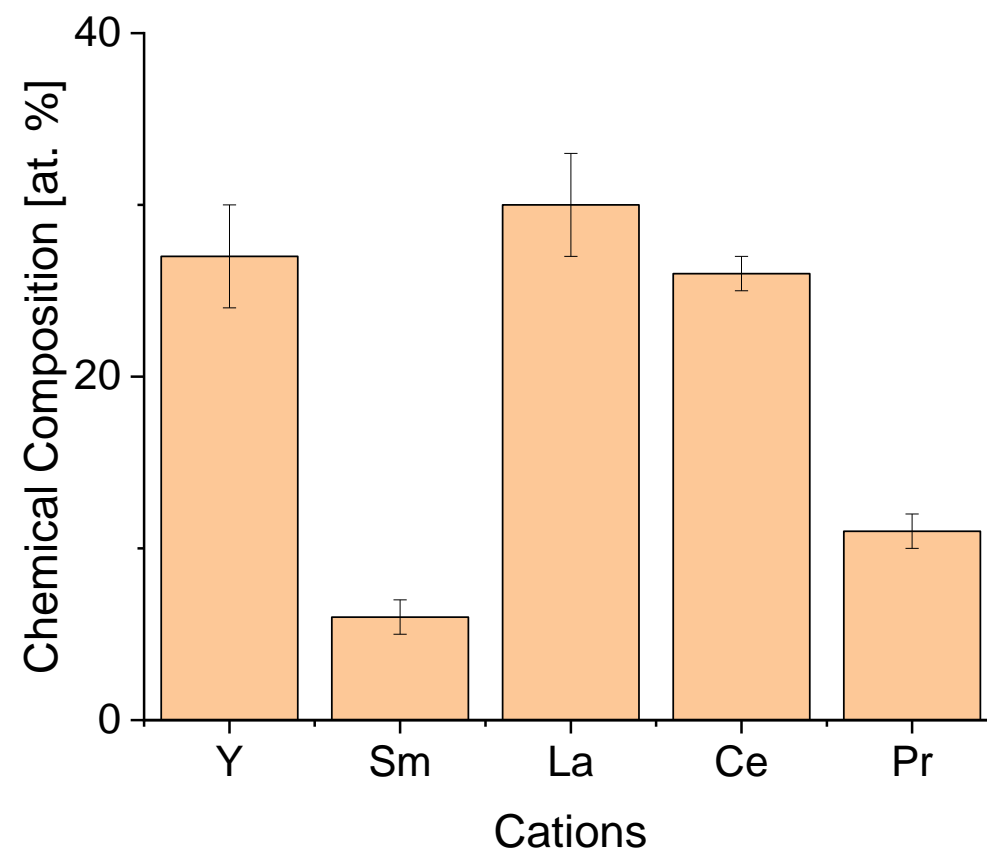




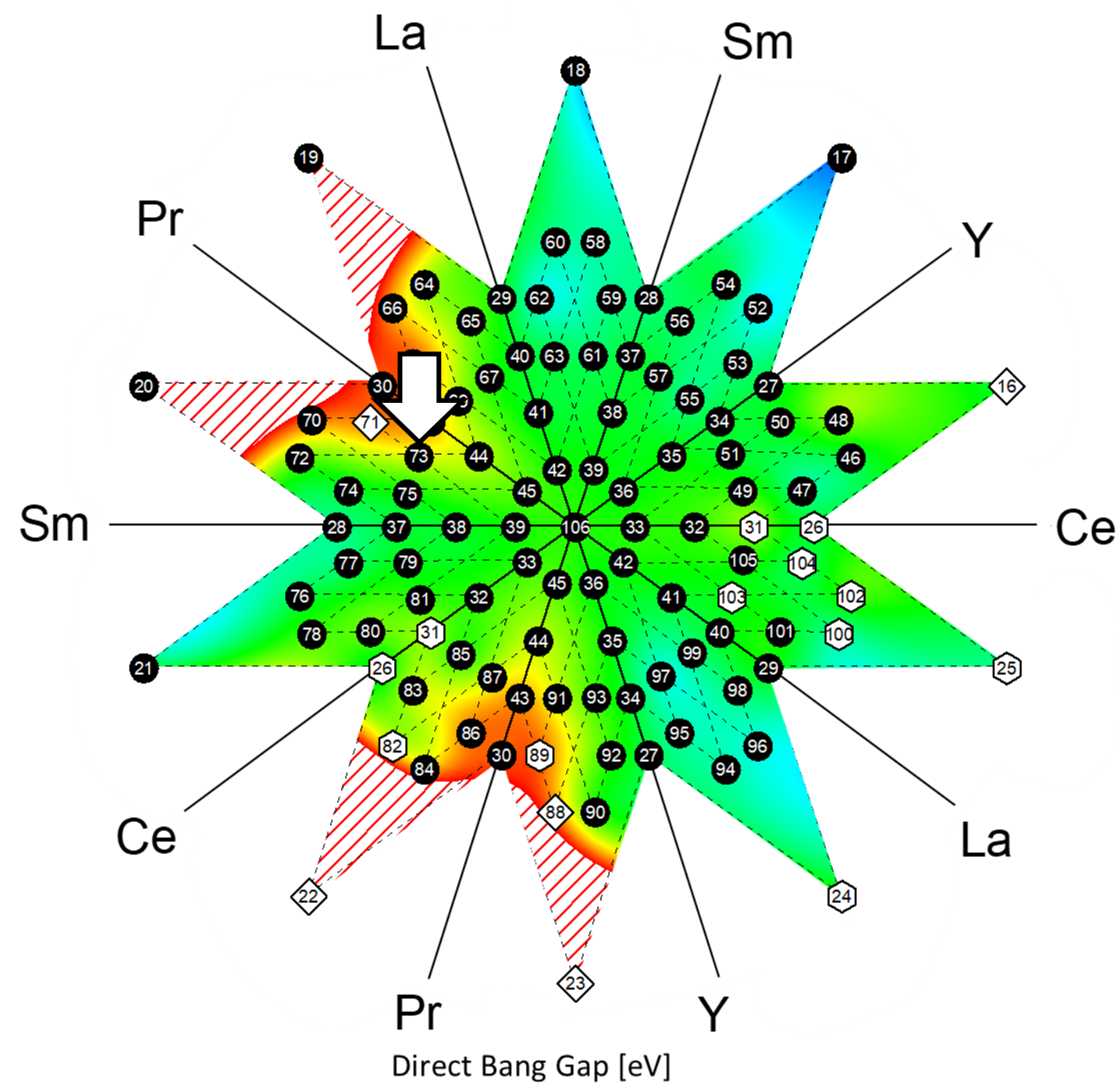
# Sample 72



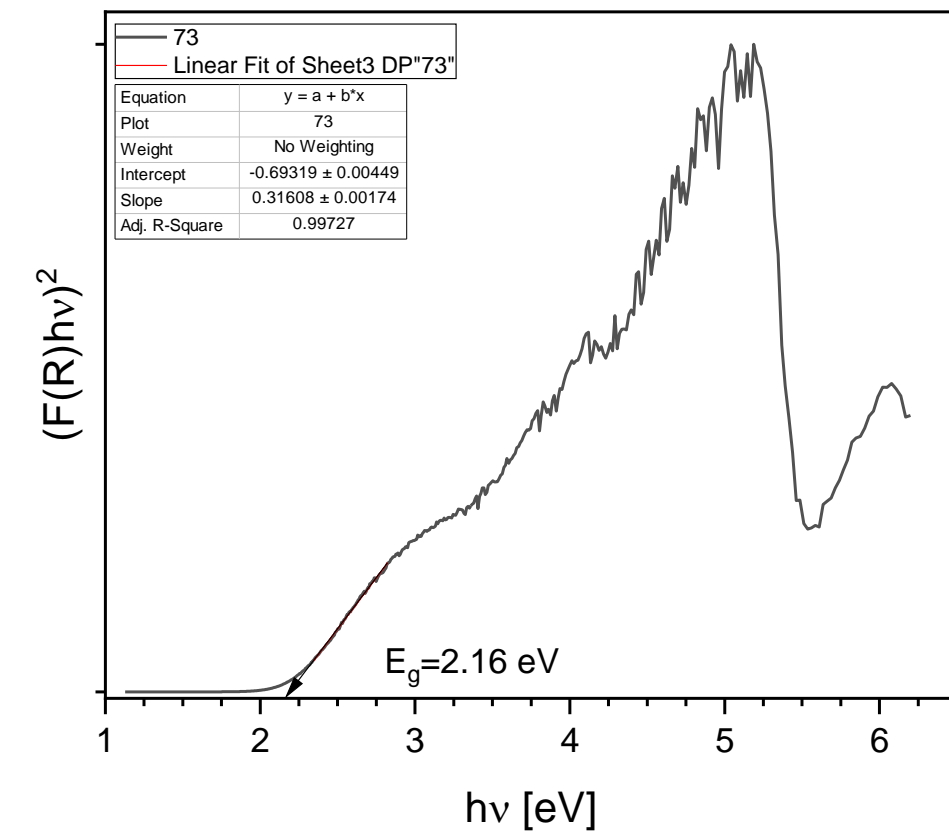
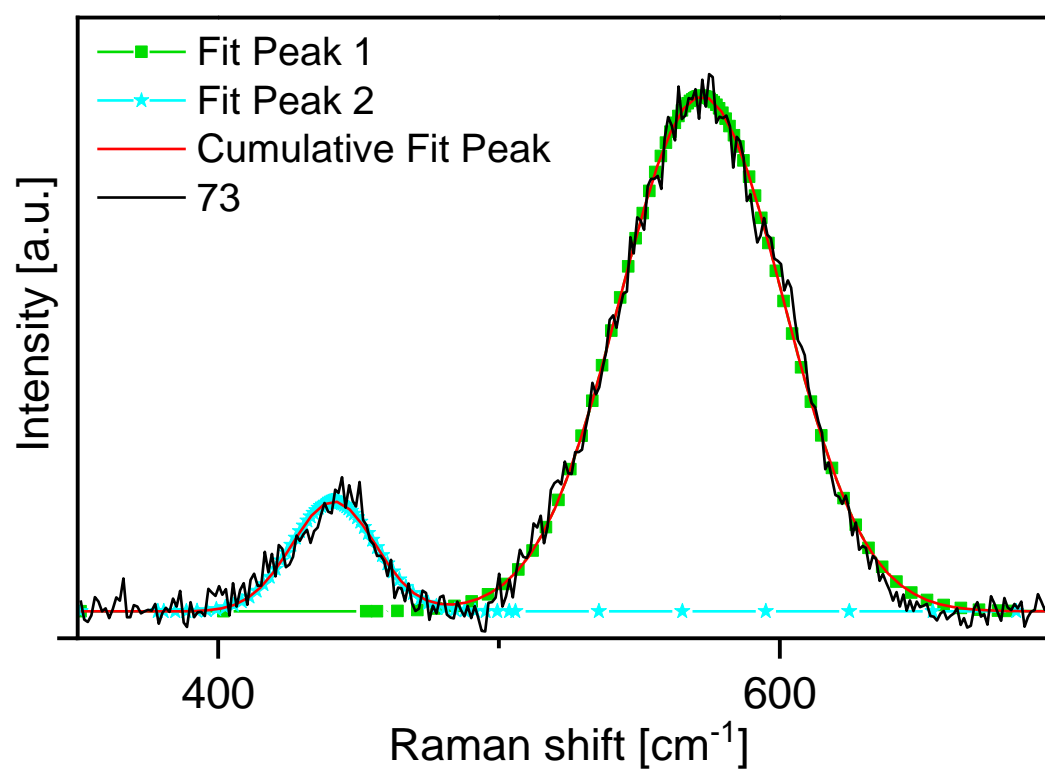
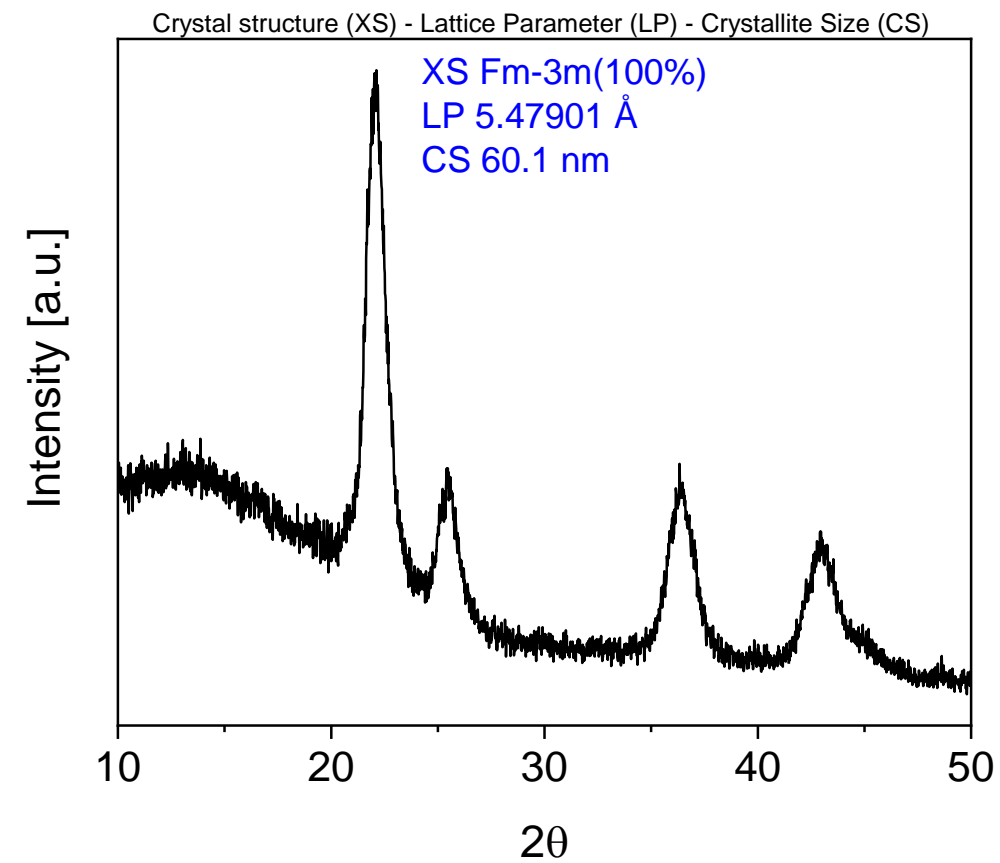
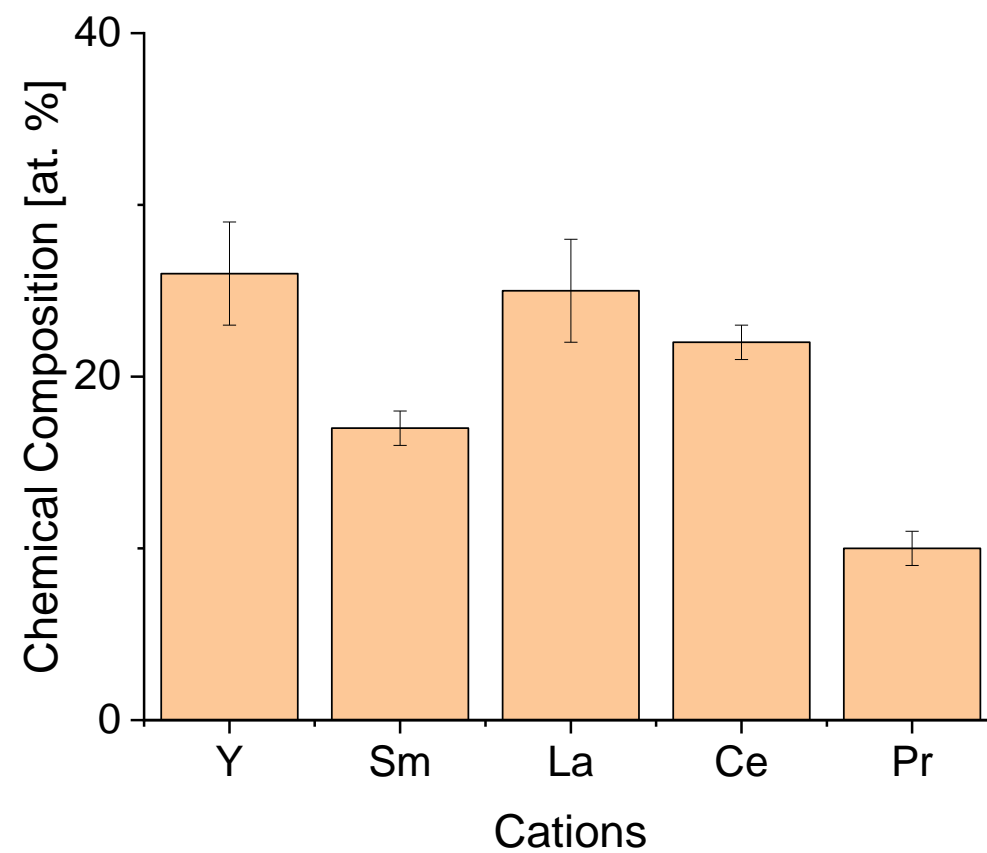
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



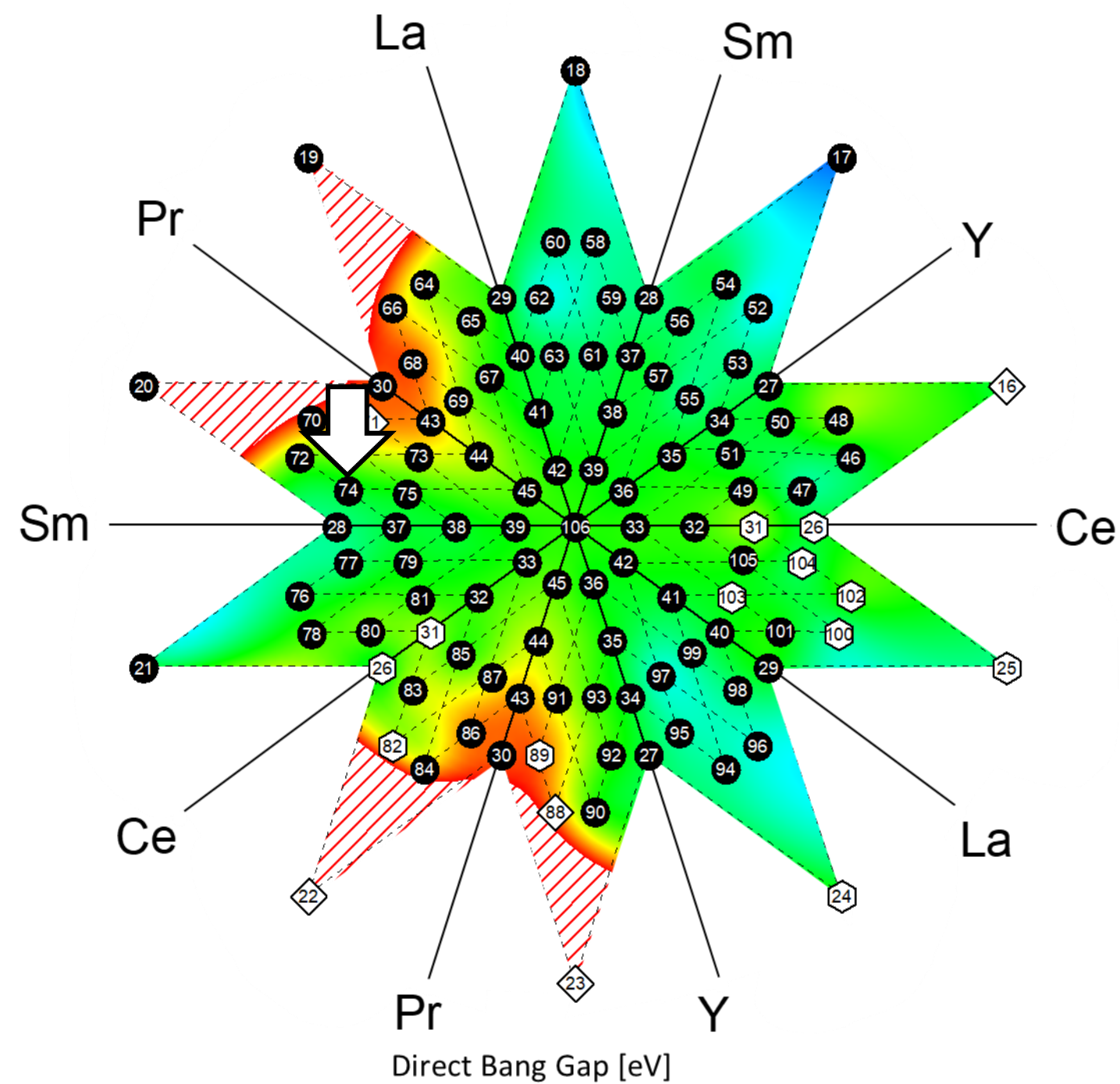
# Sample 73



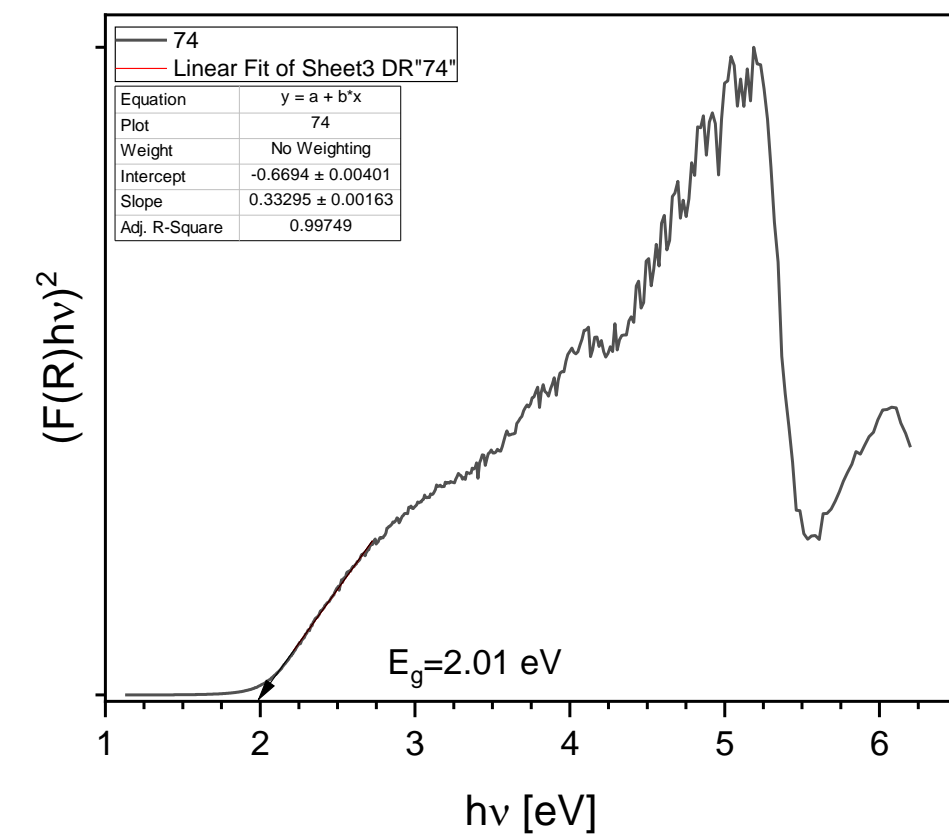
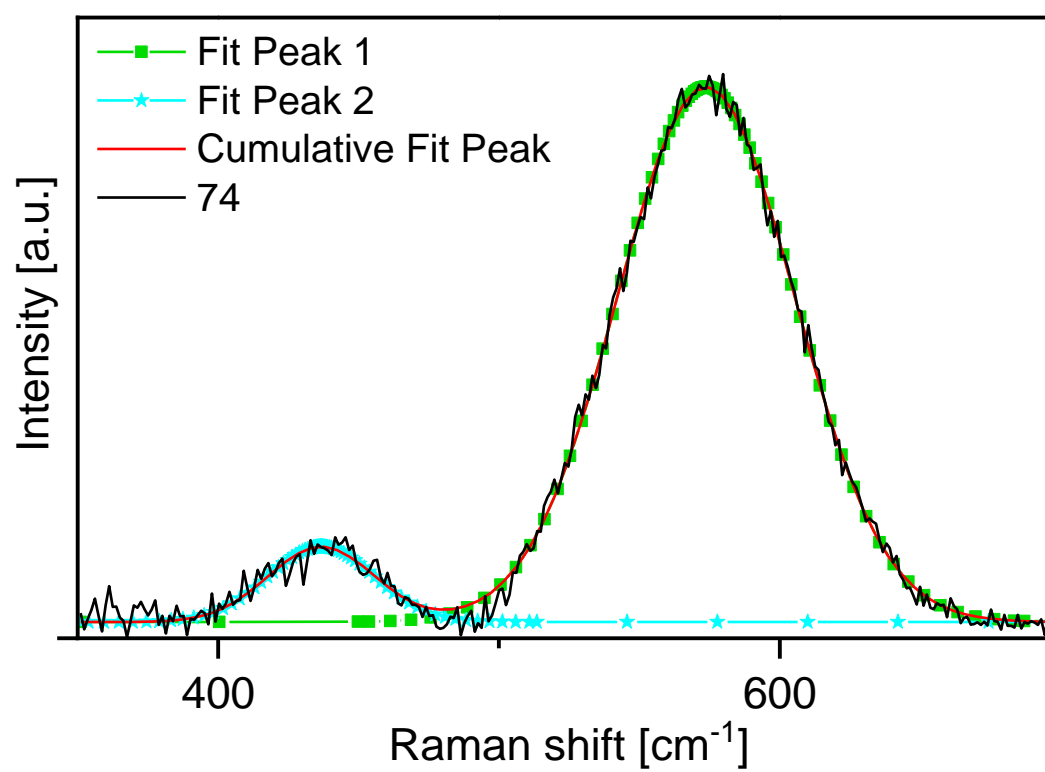
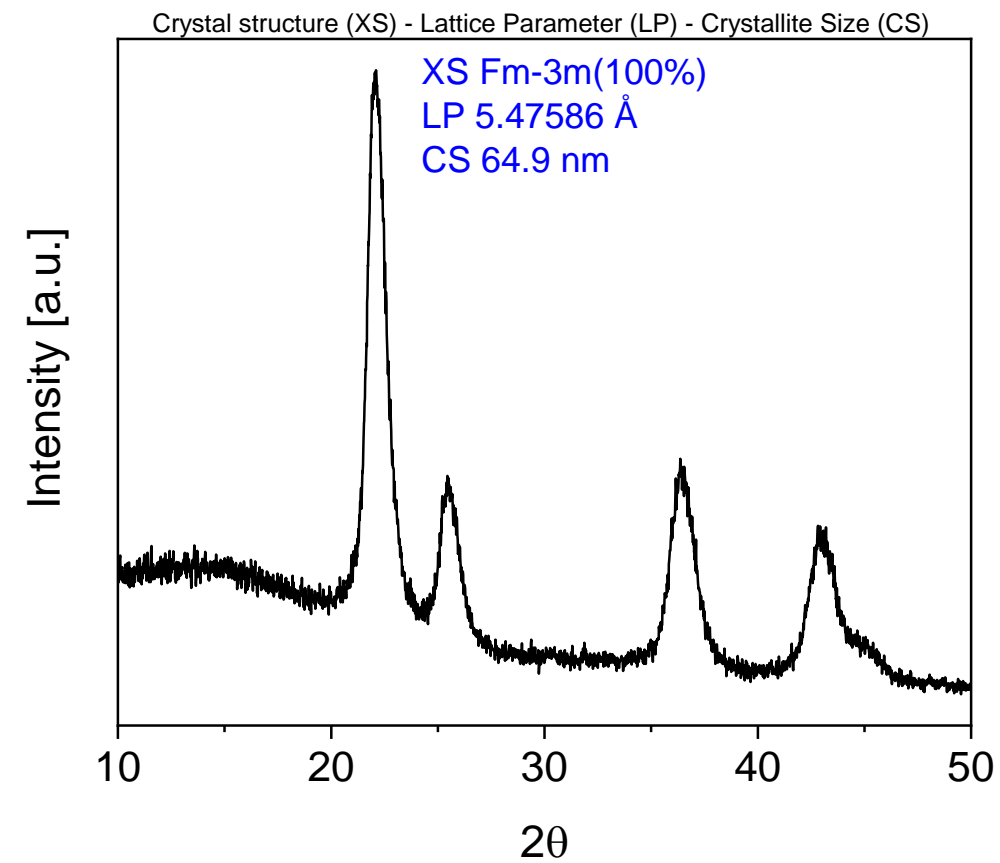
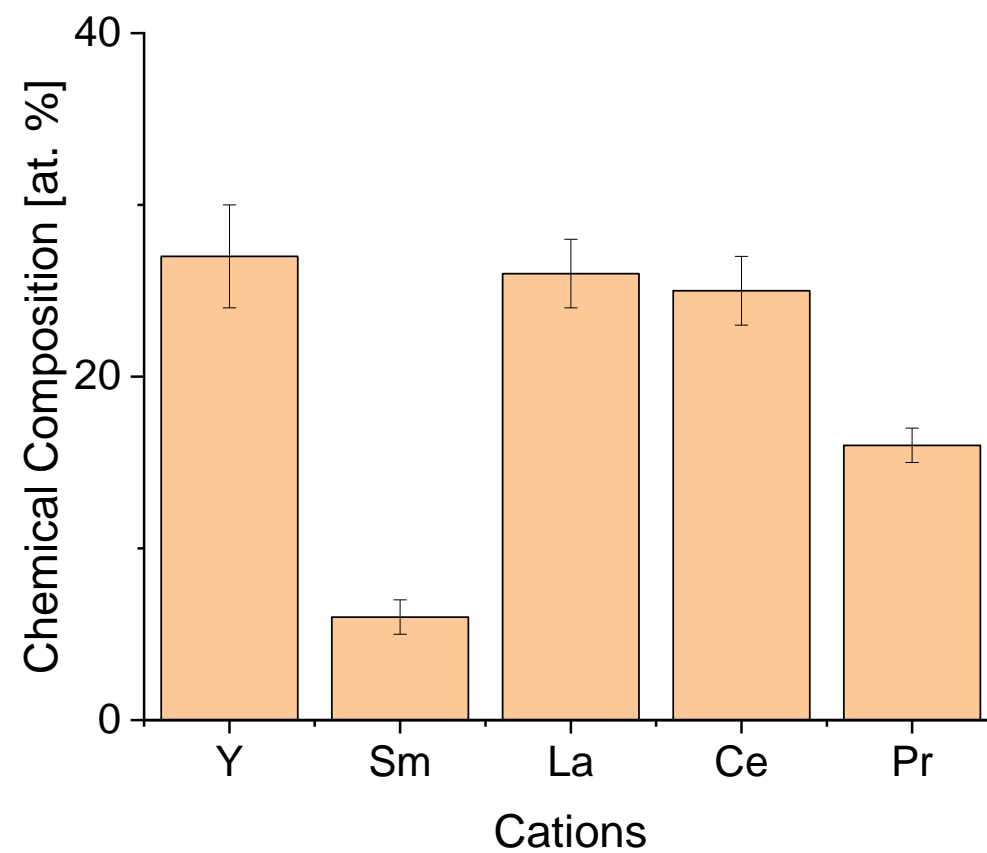
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



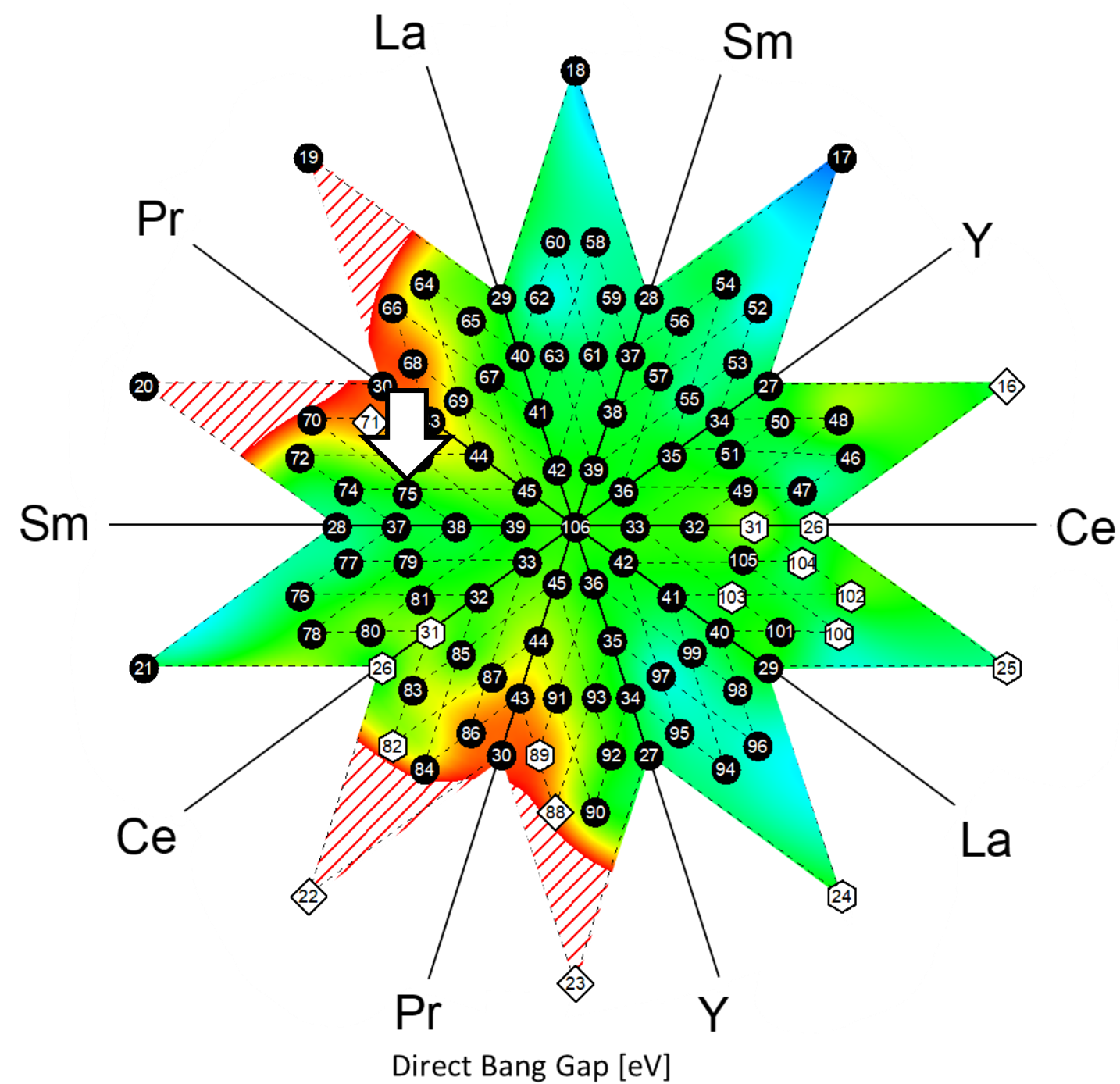
# Sample 74



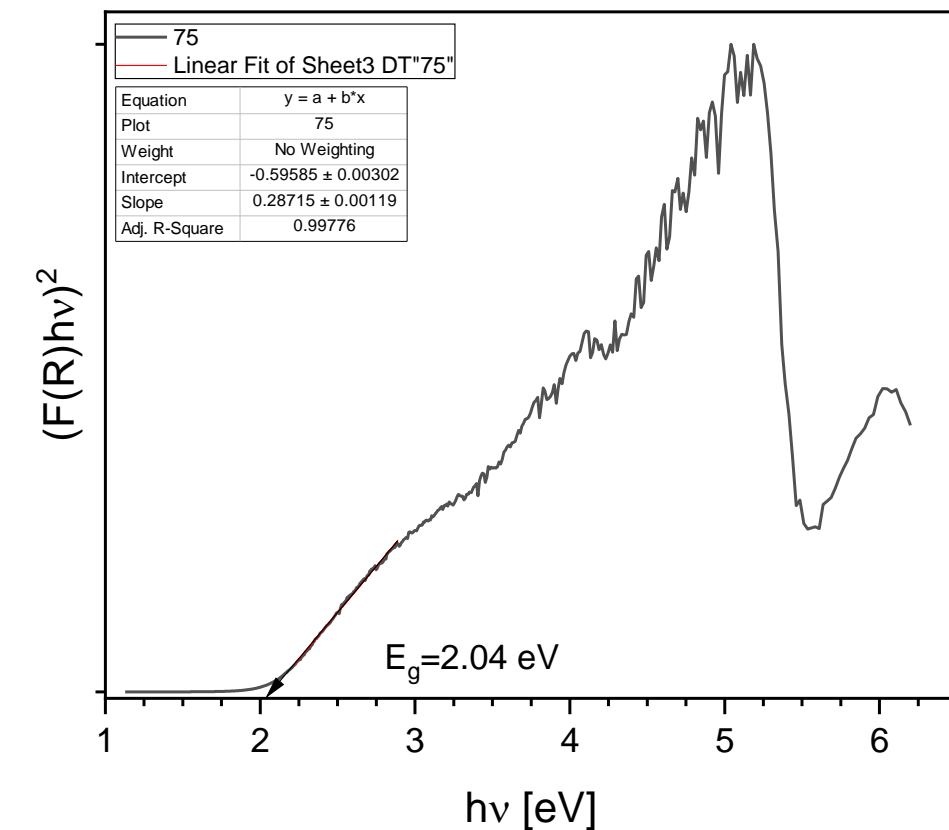
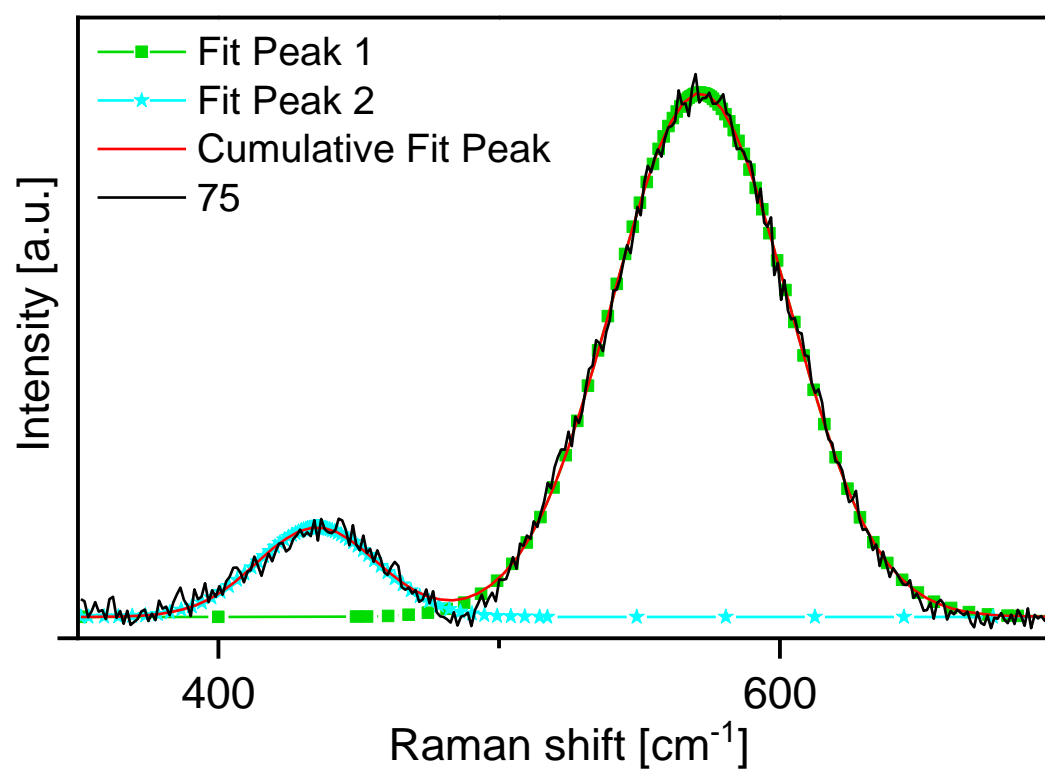
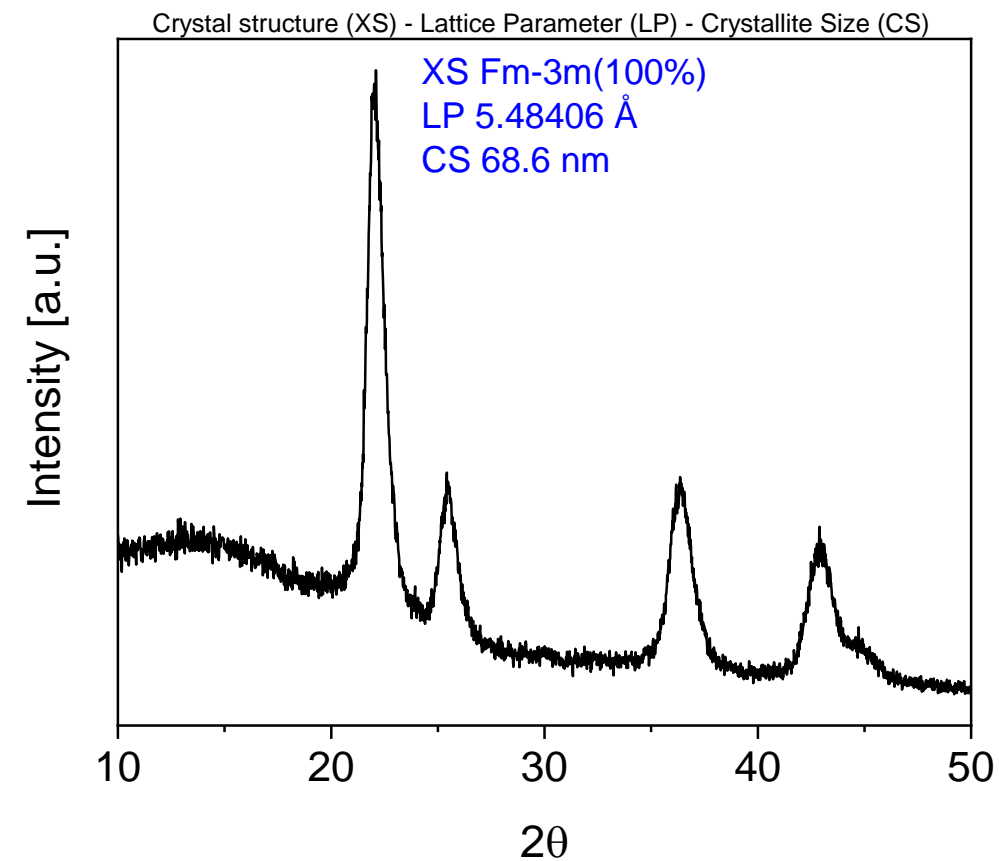
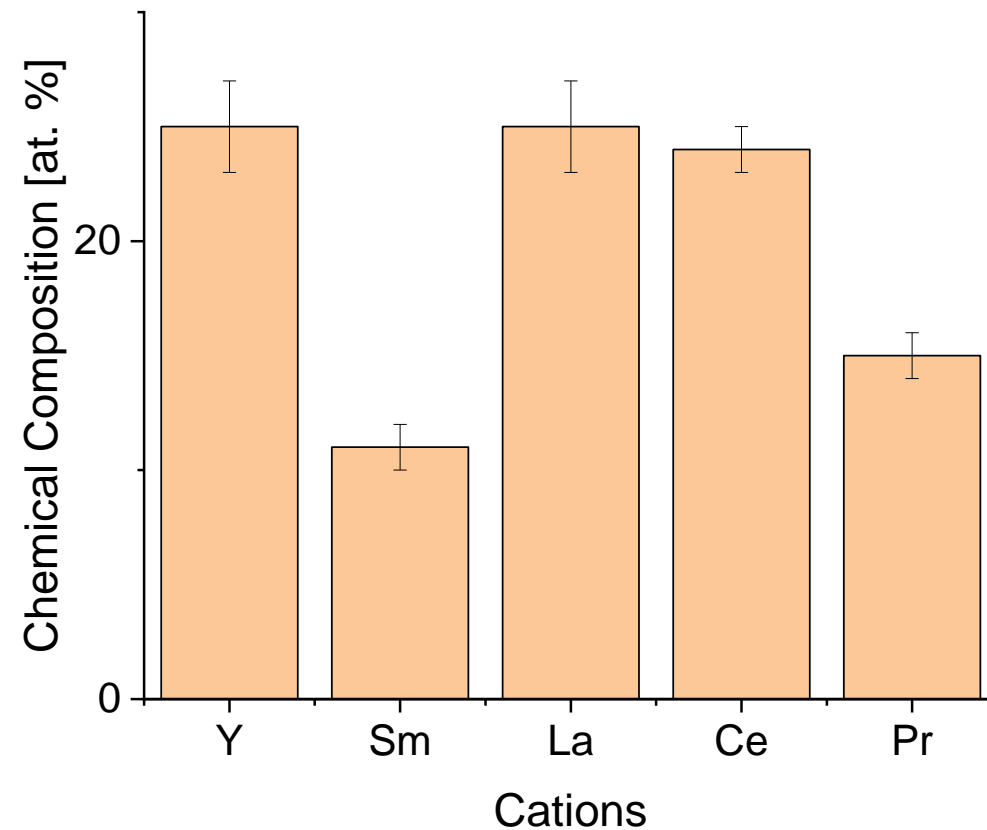
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



# Sample 75

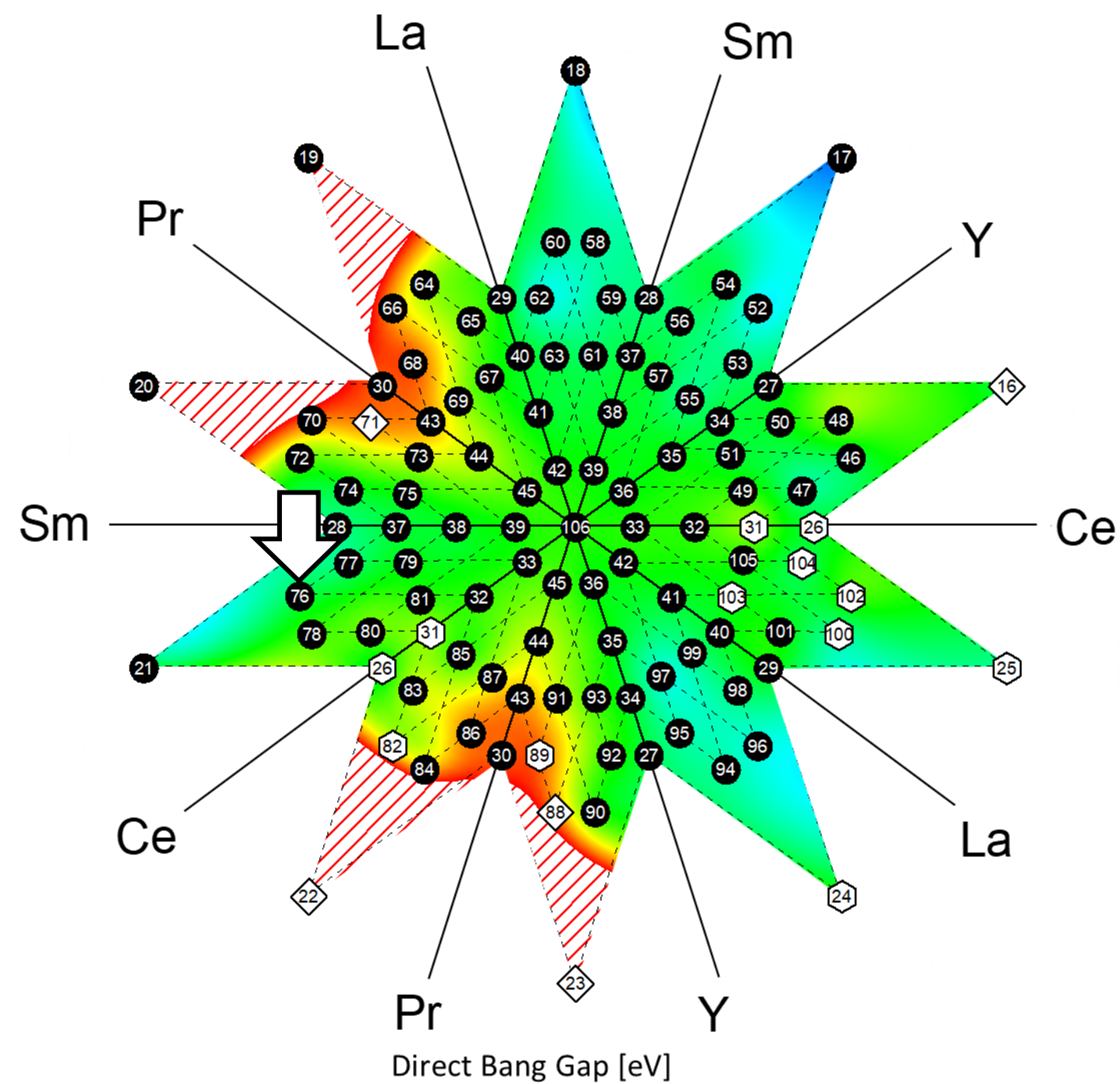


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

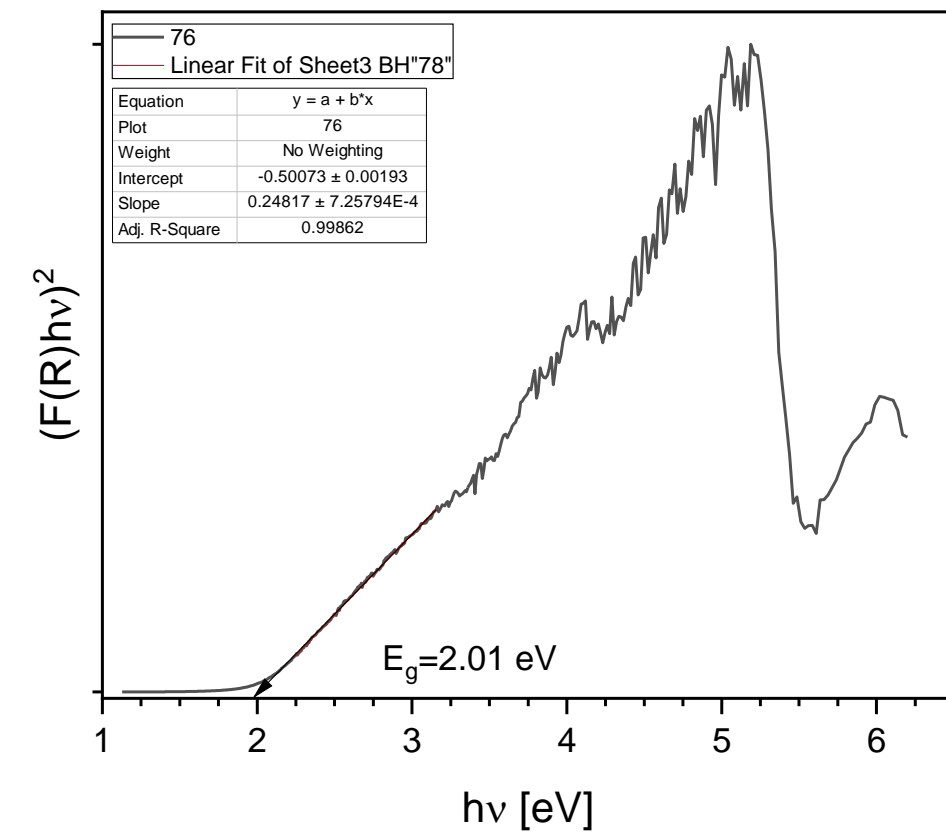
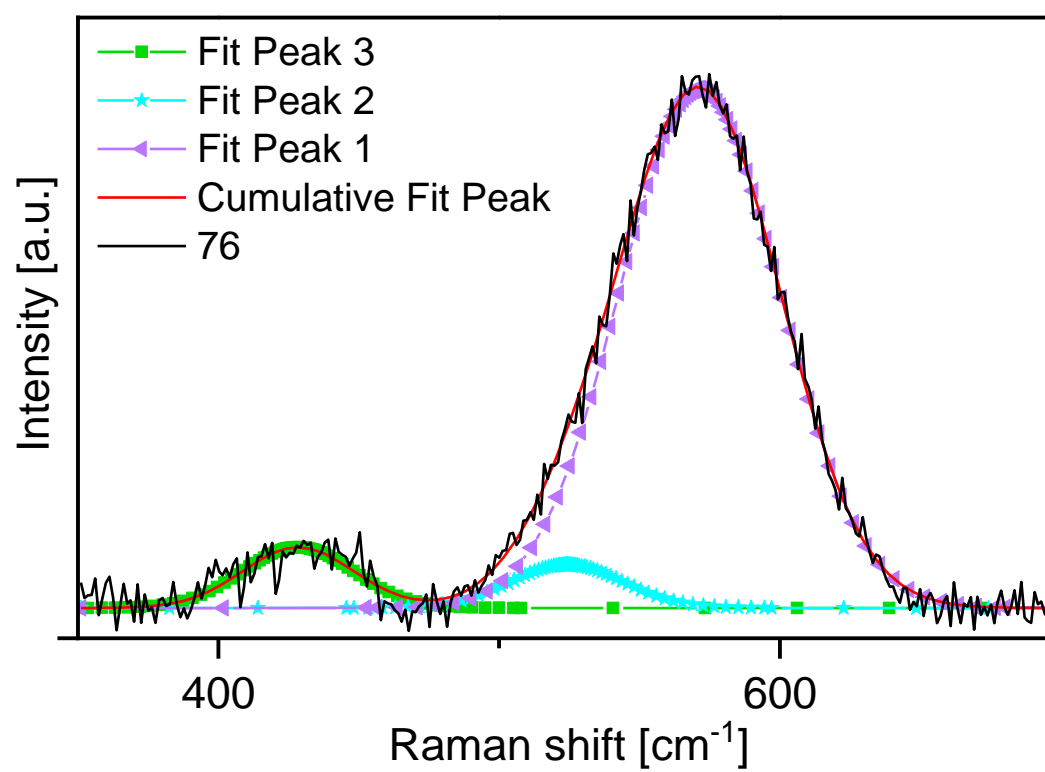
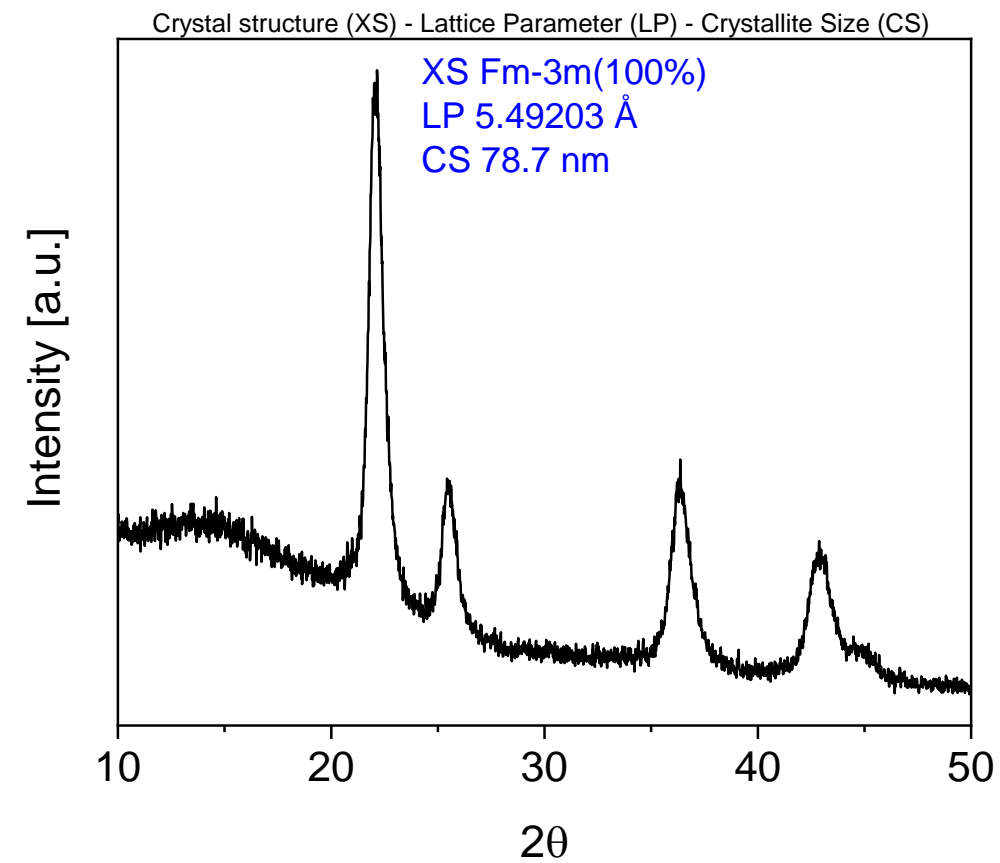
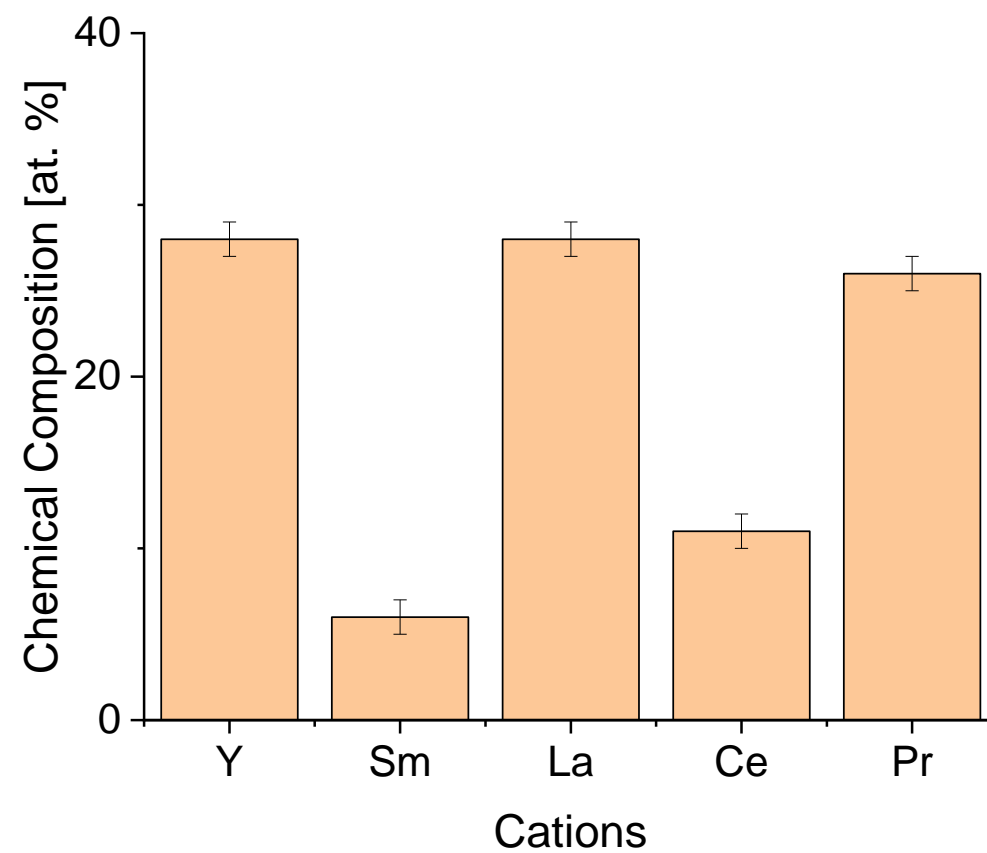




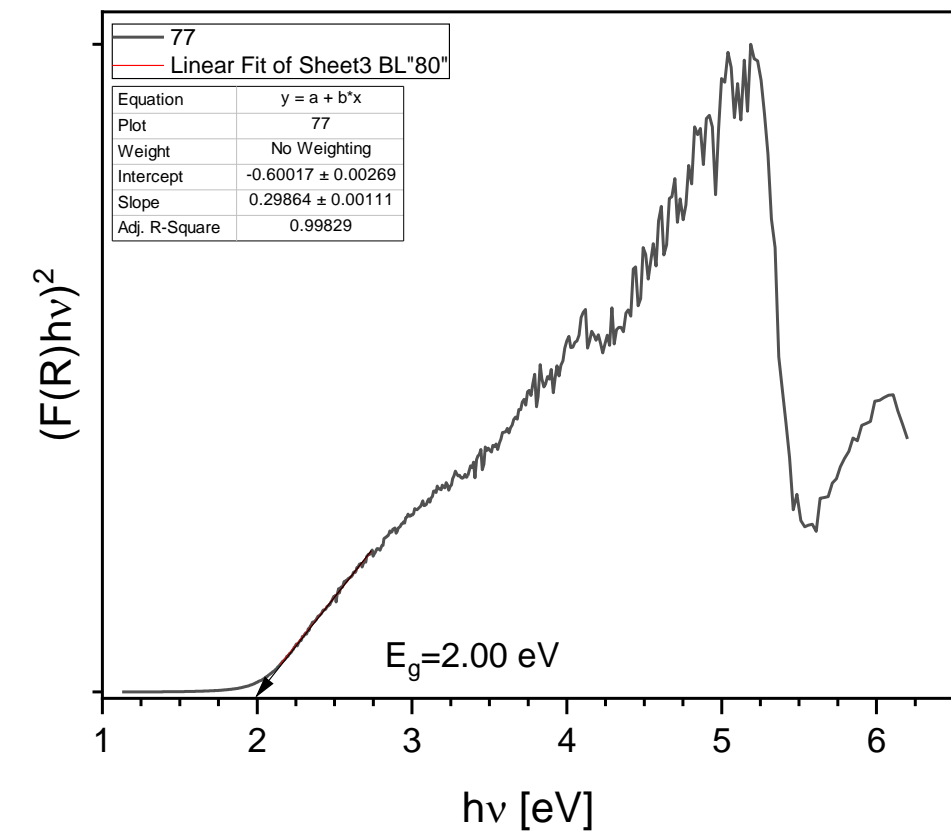
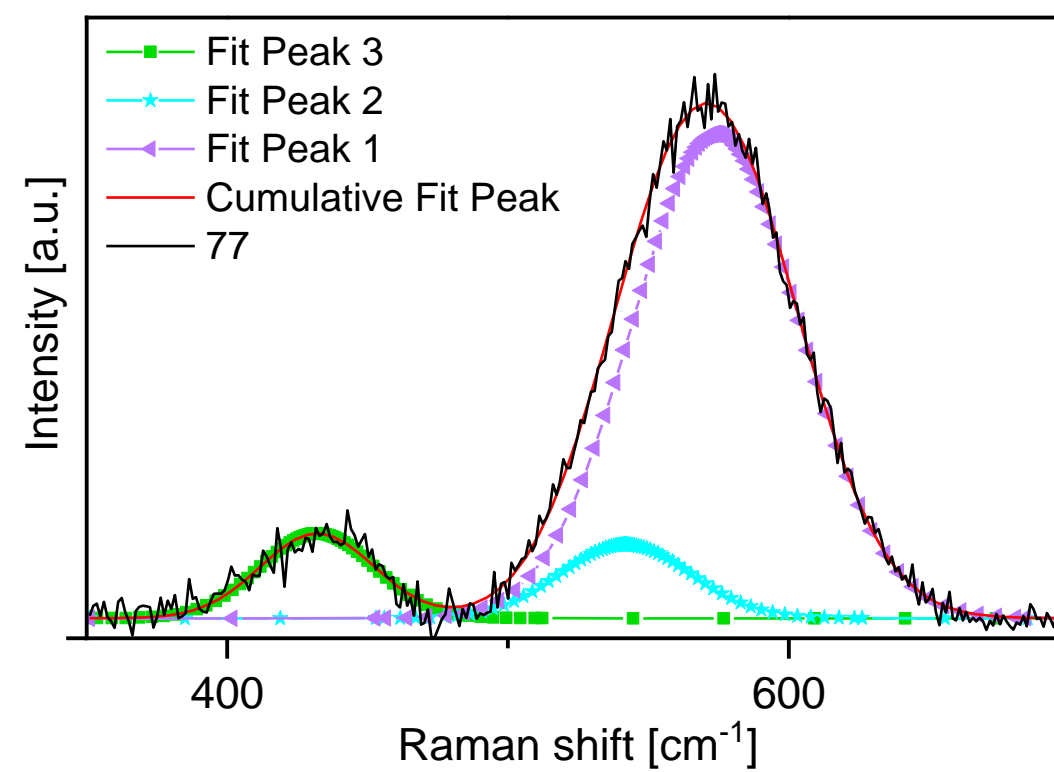
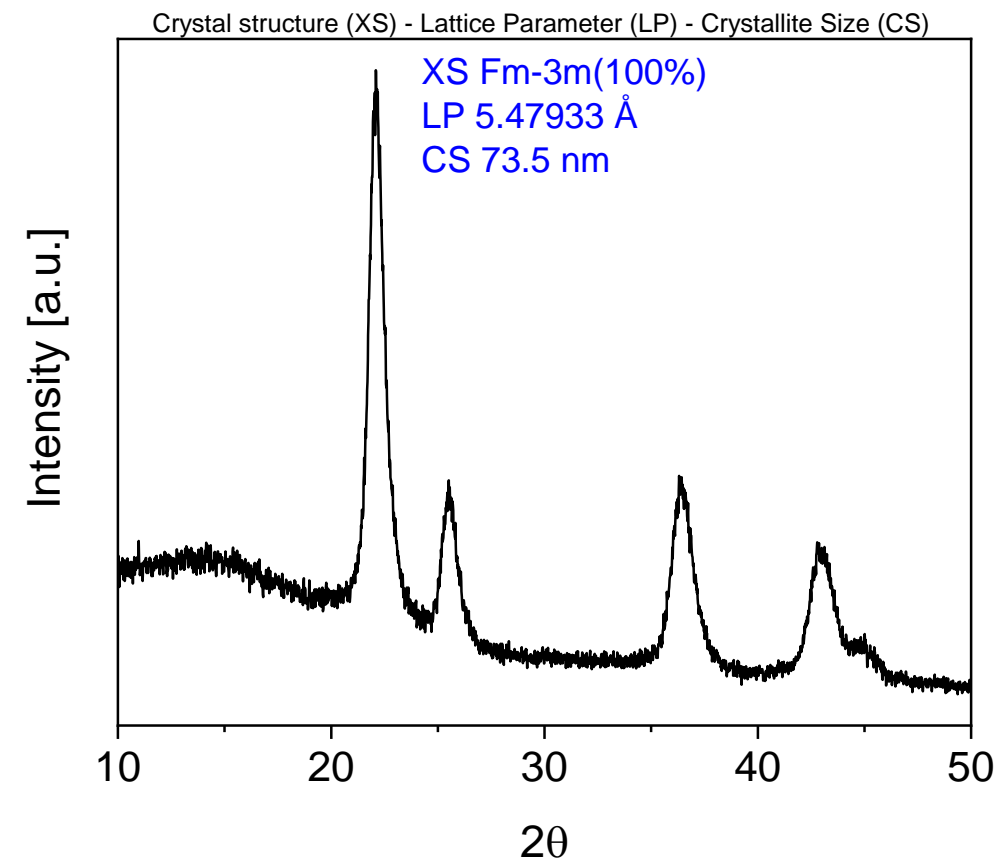
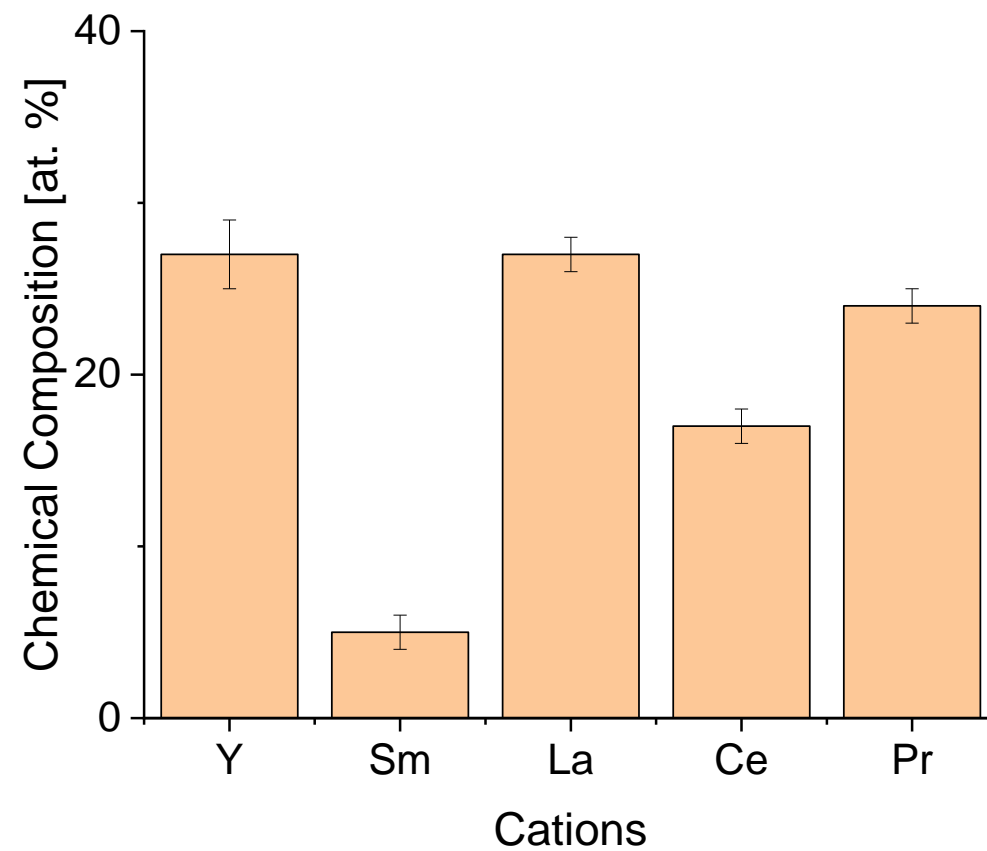
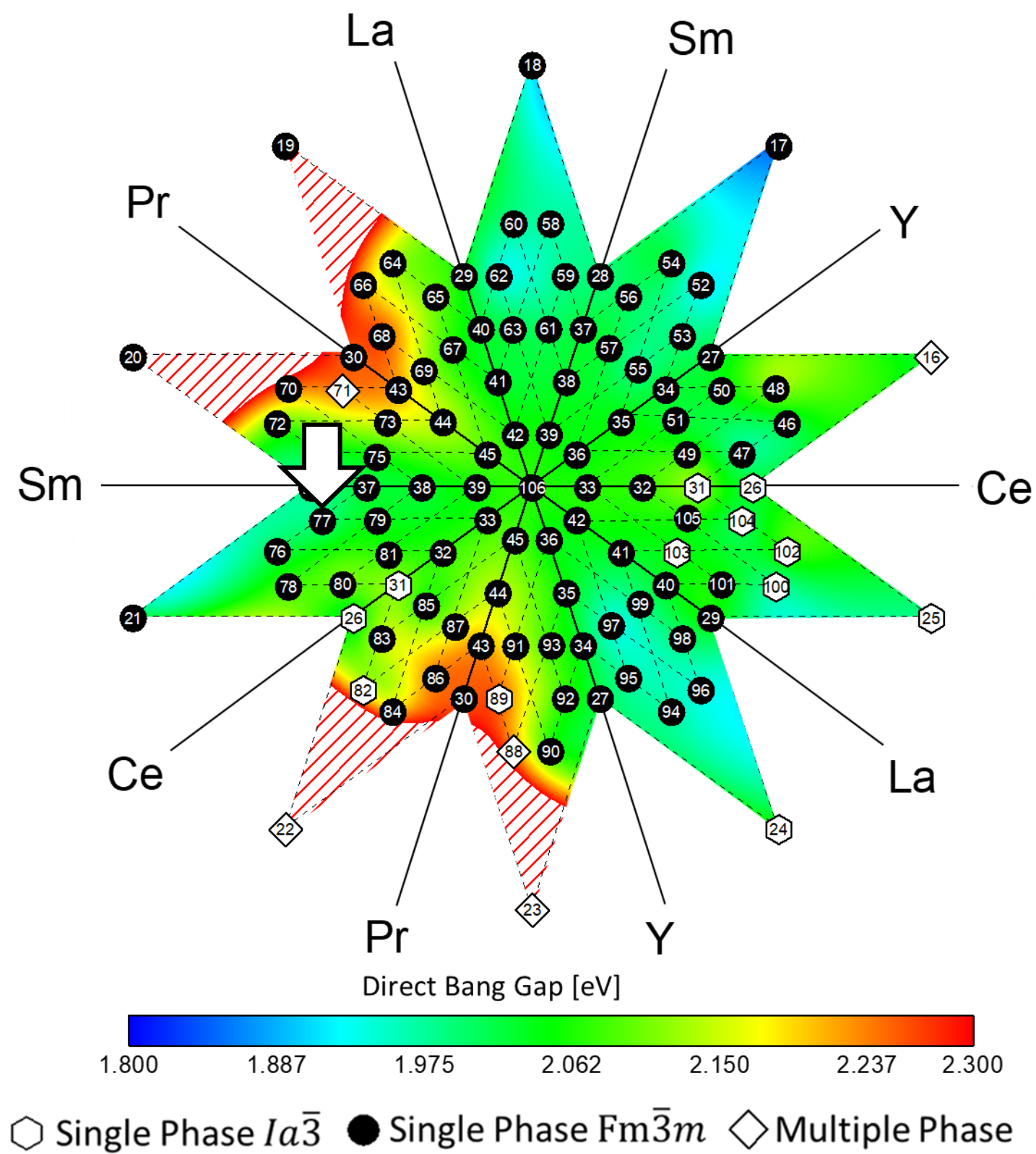
# Sample 76



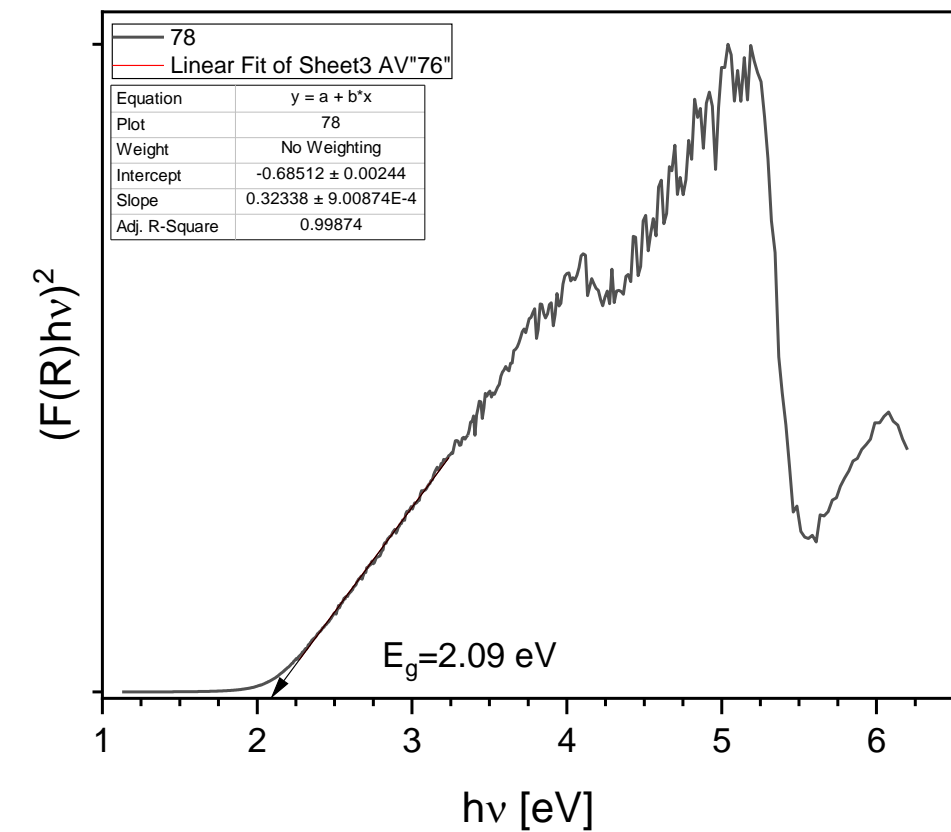
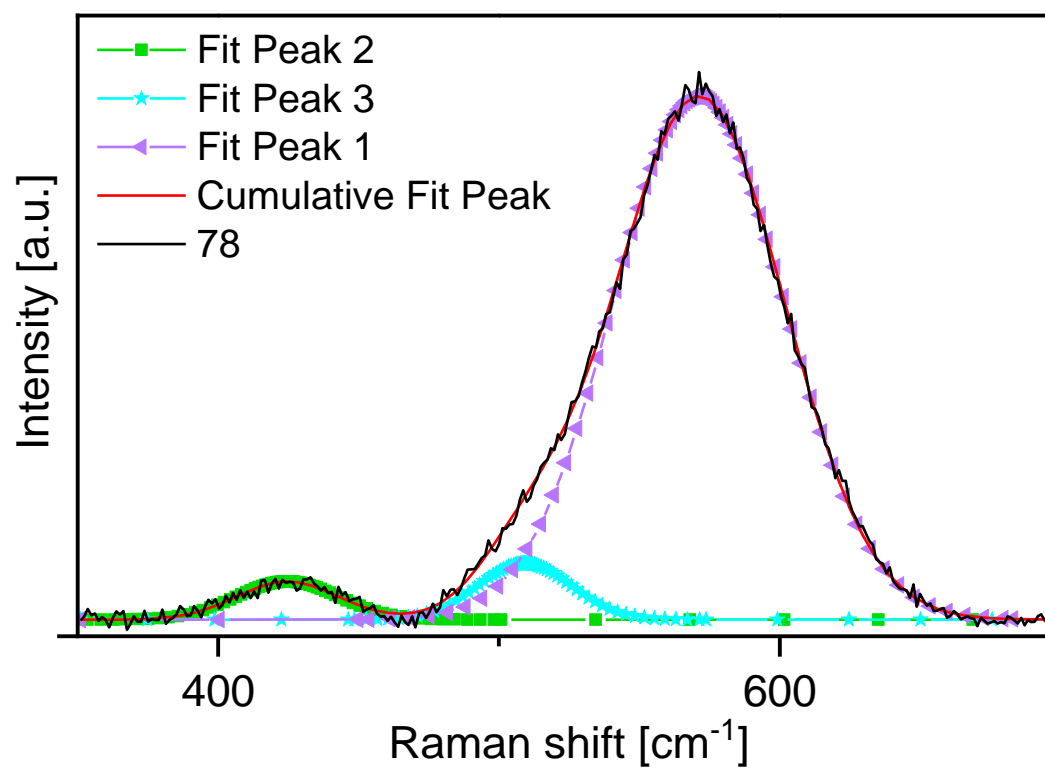
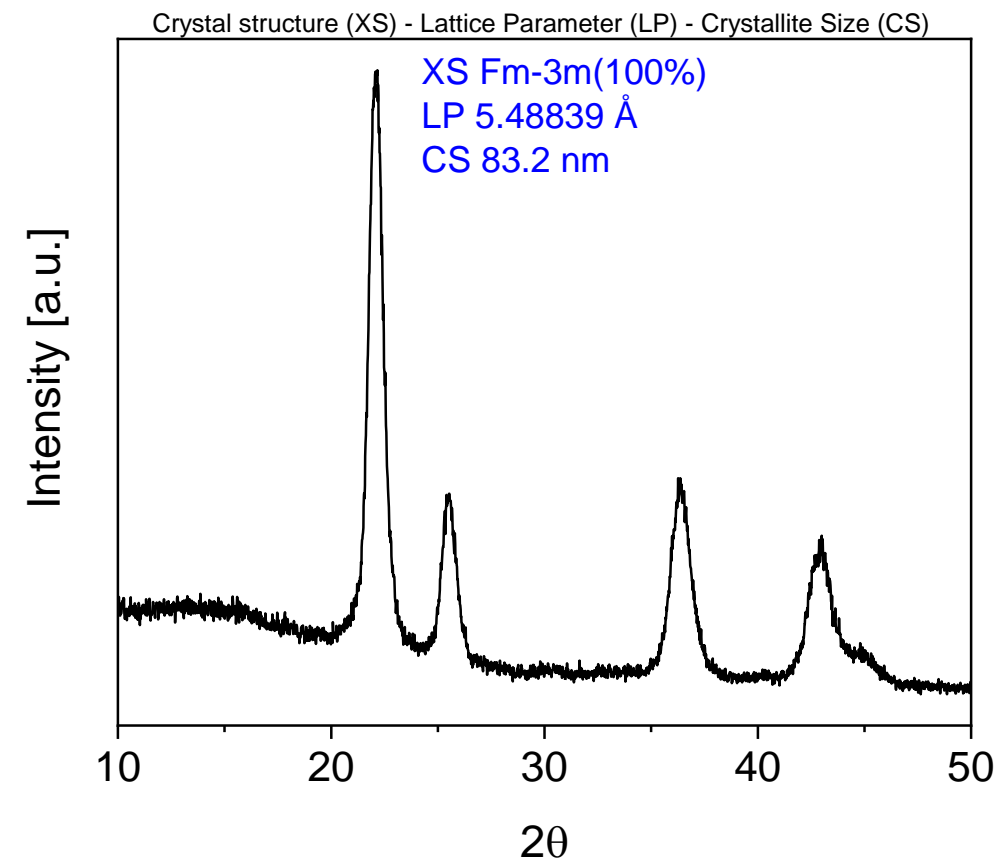
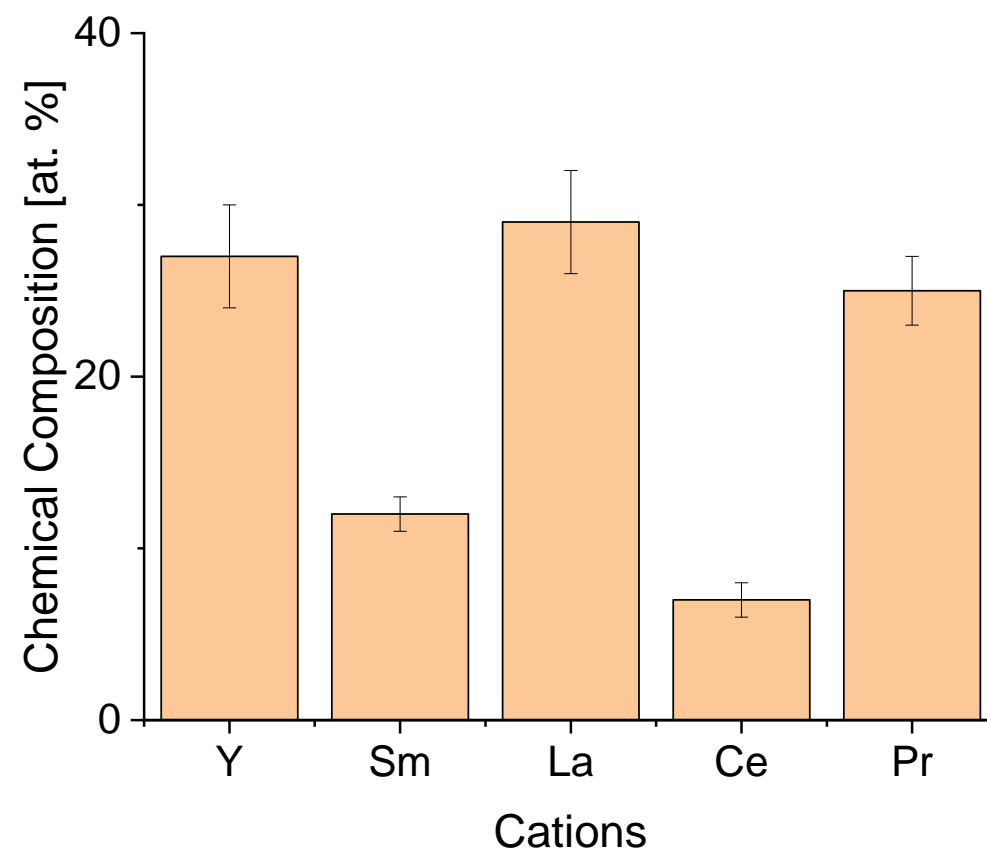
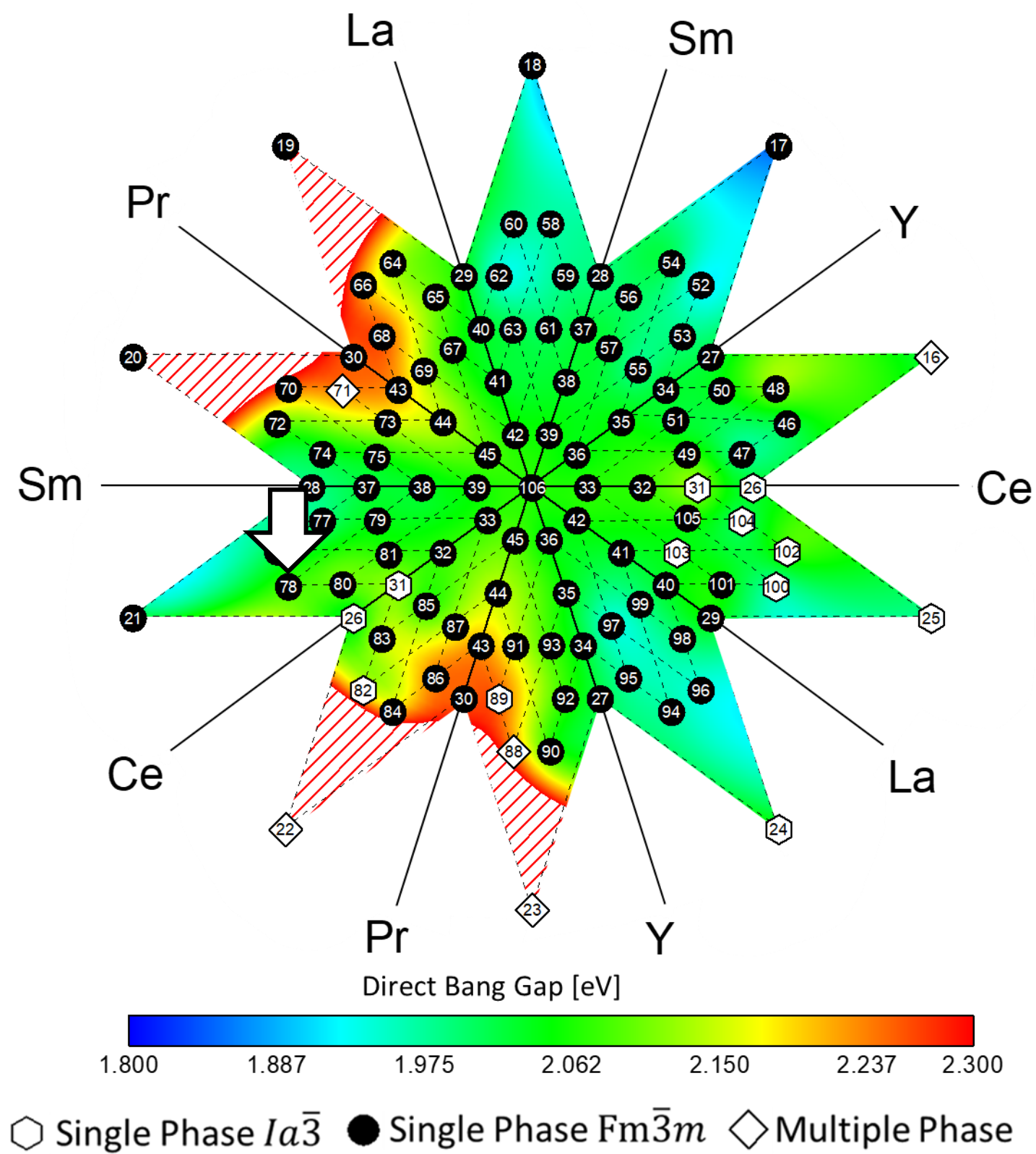
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



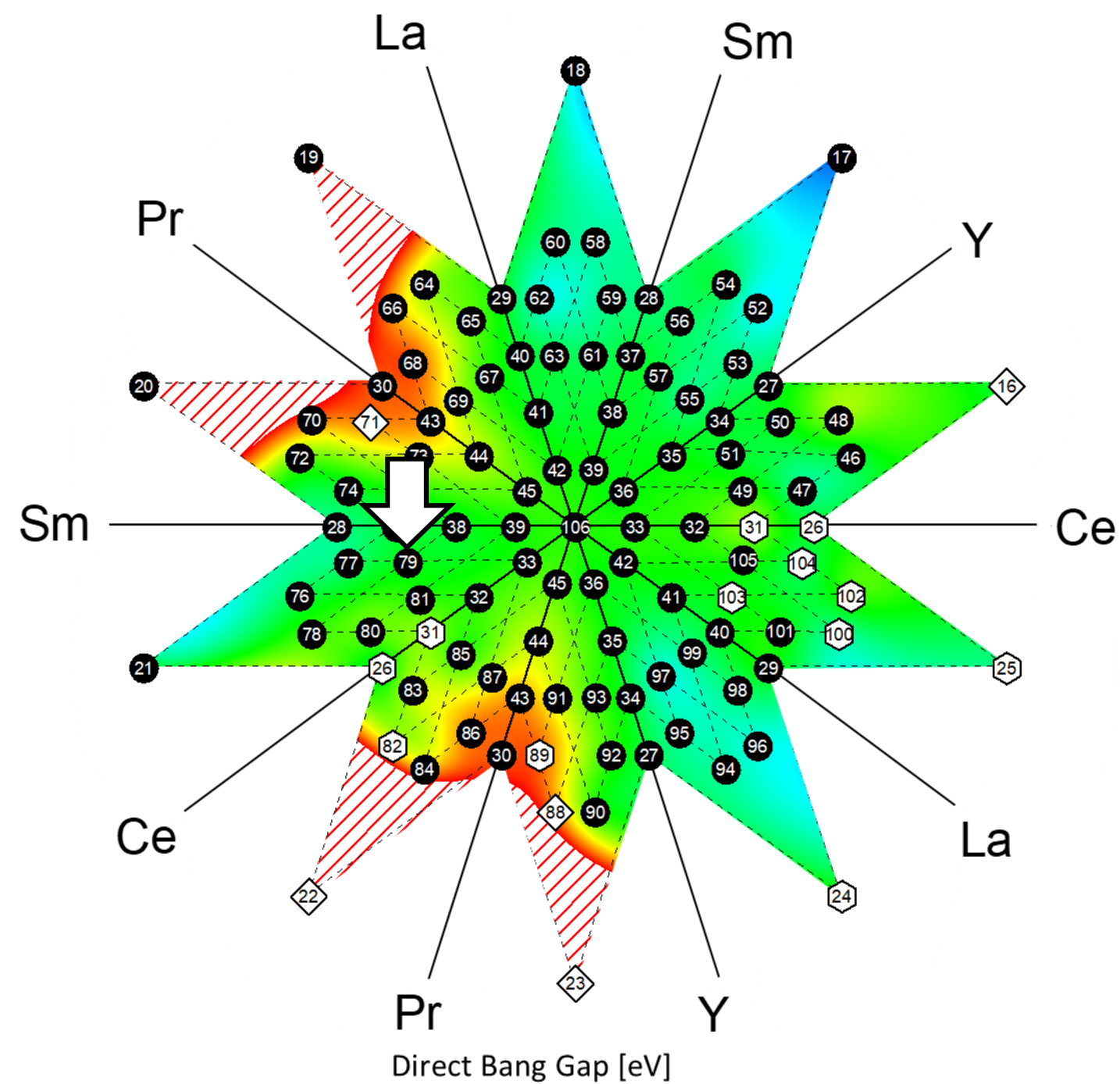
# Sample 77



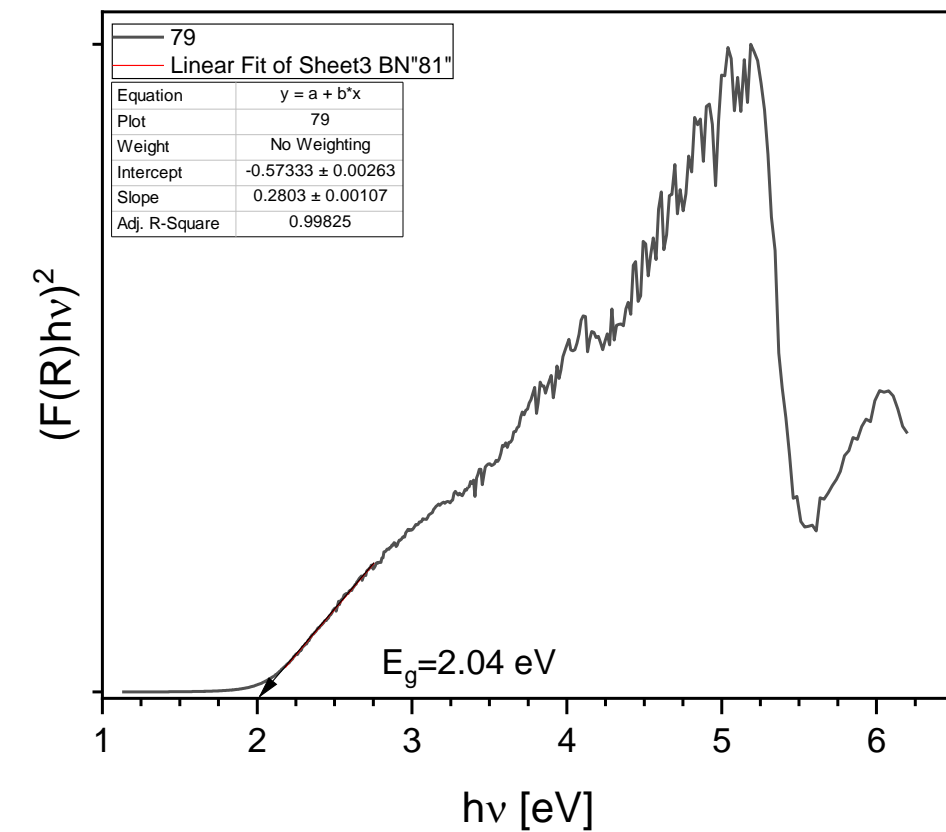
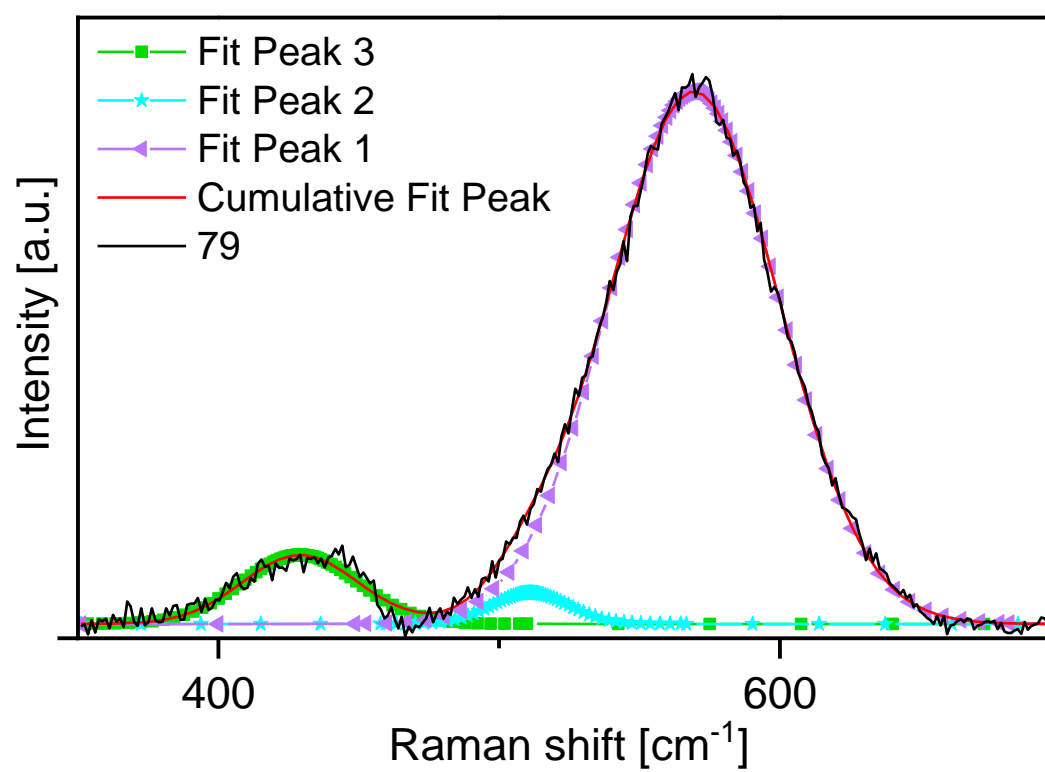
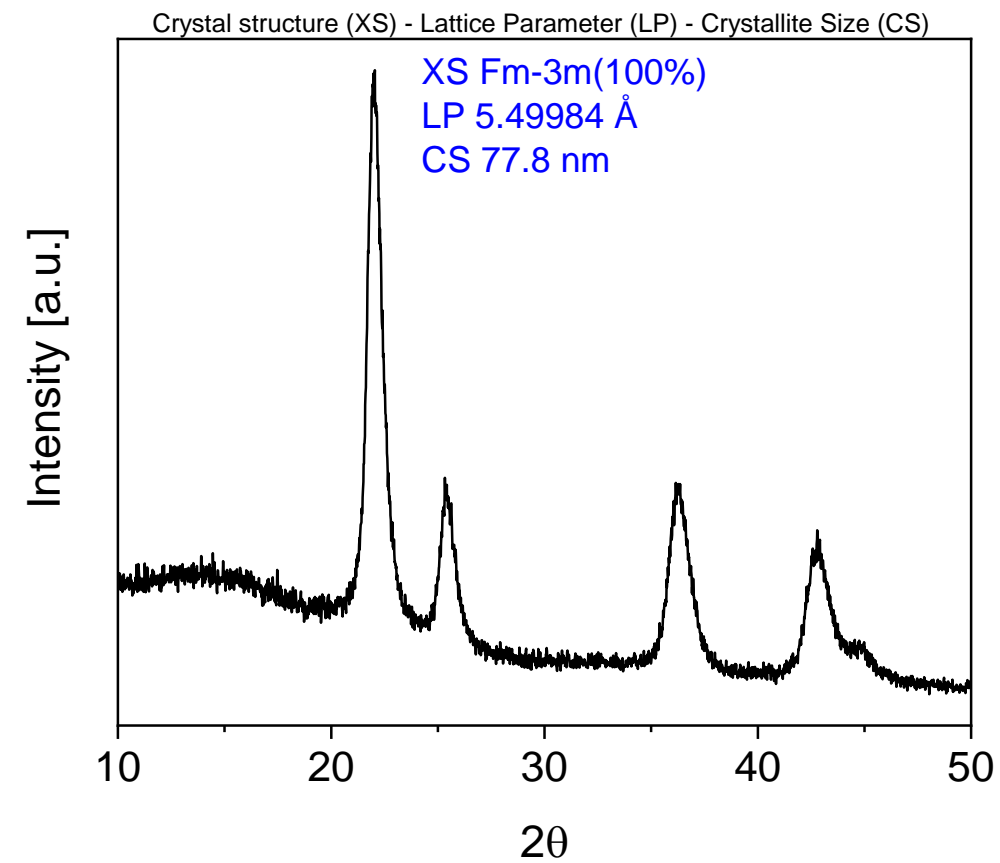
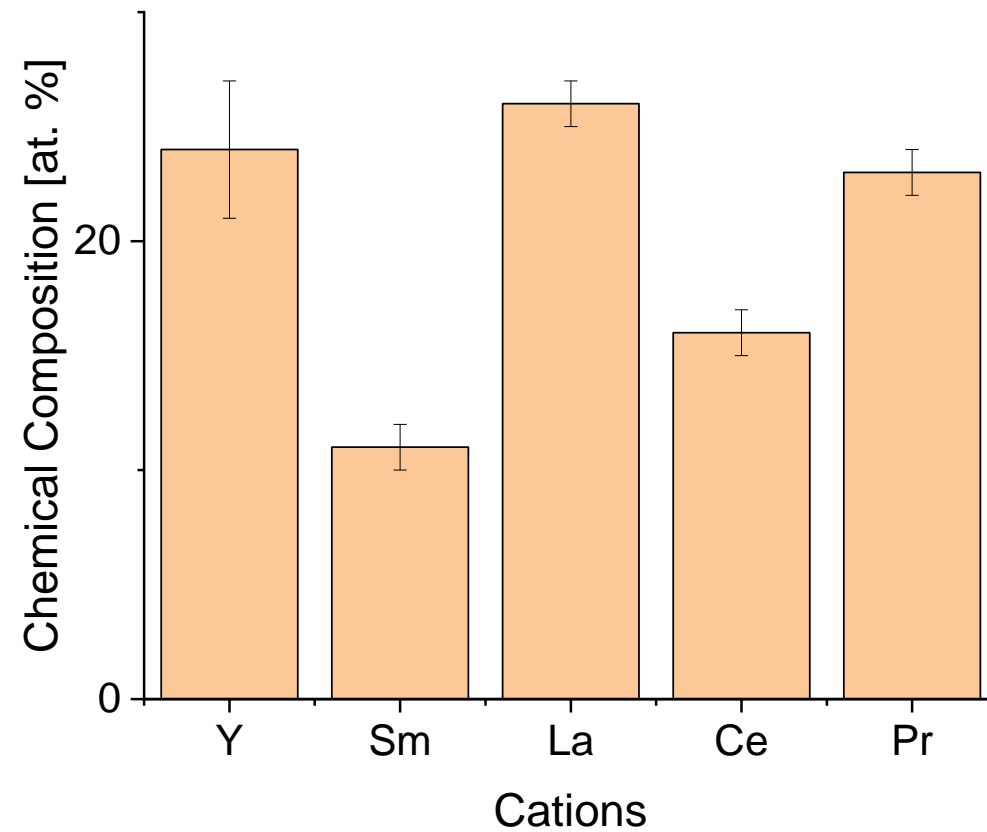
# Sample 78



# Sample 79

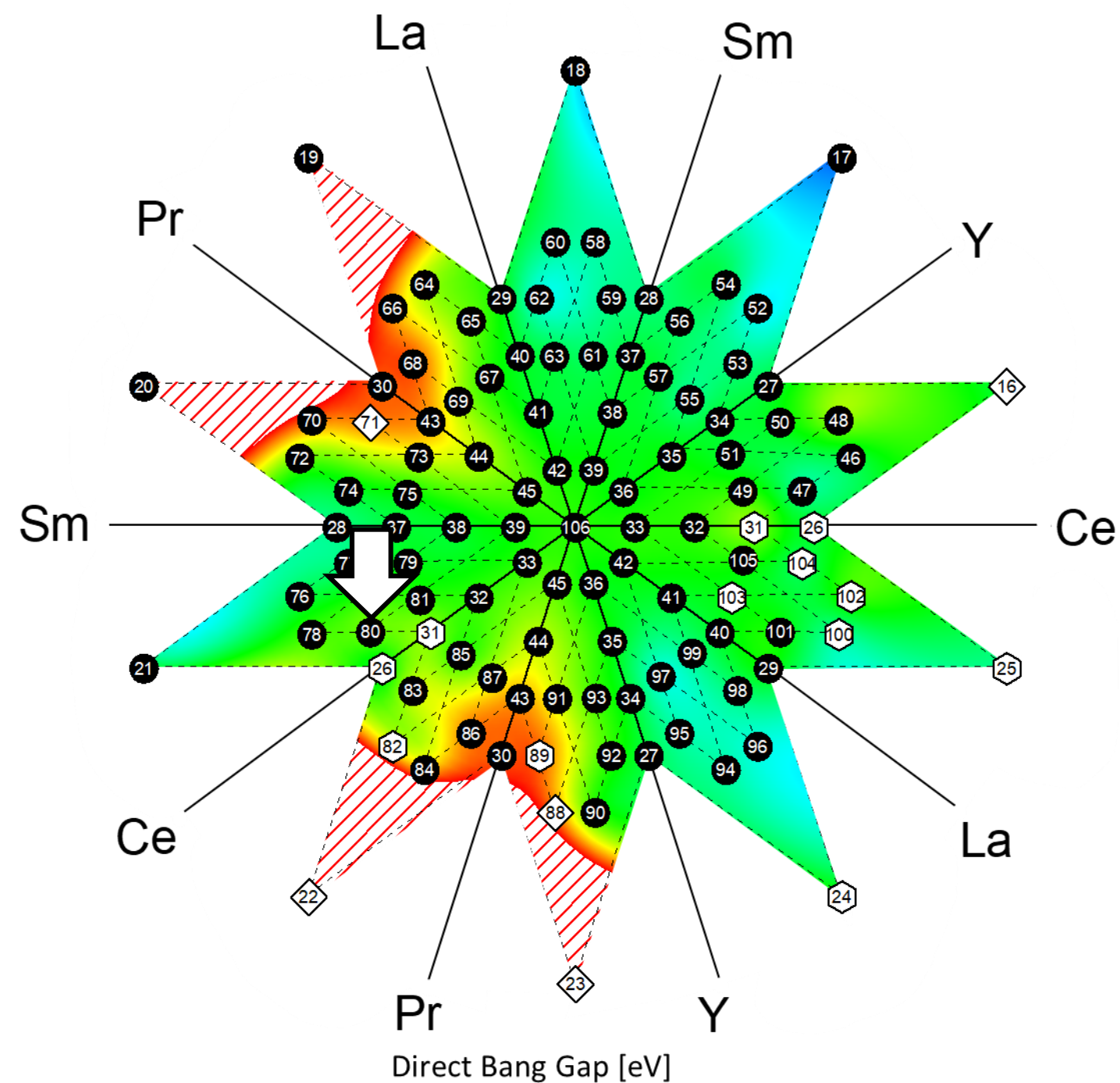


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

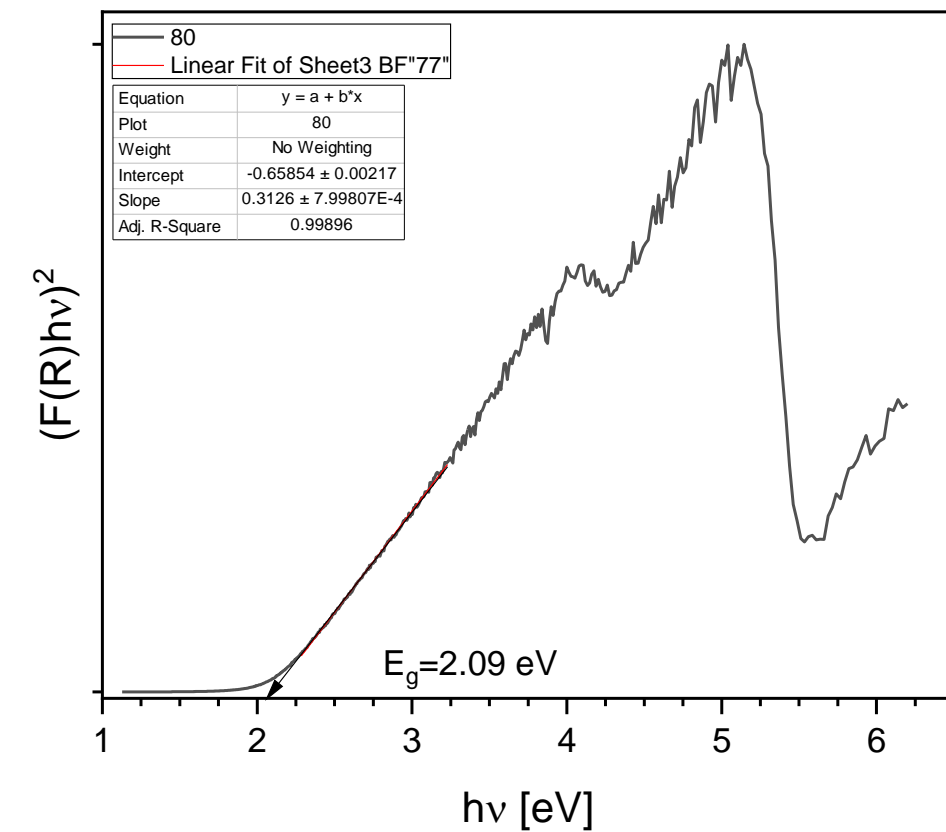
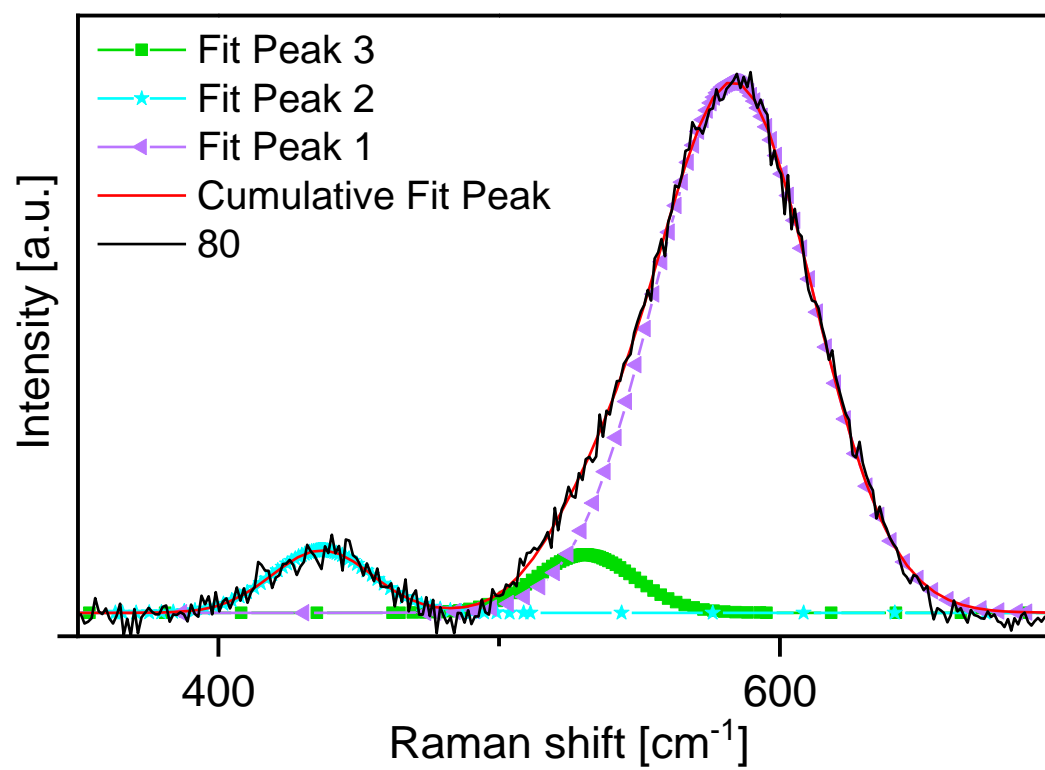
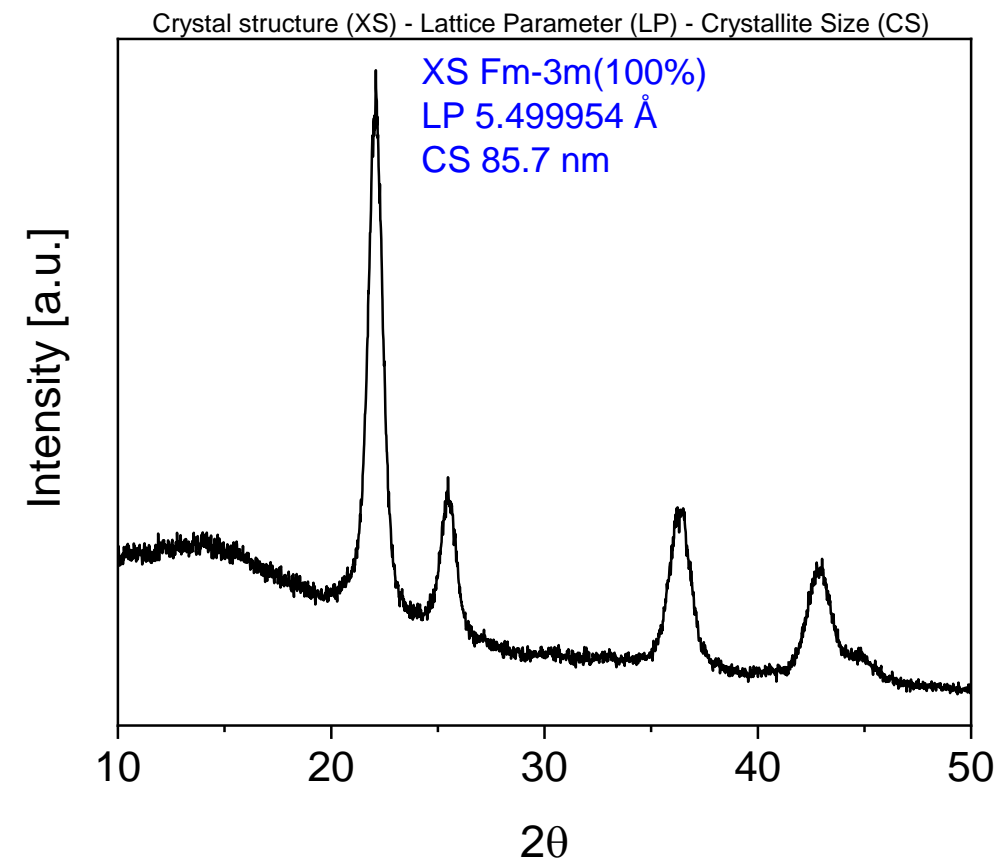
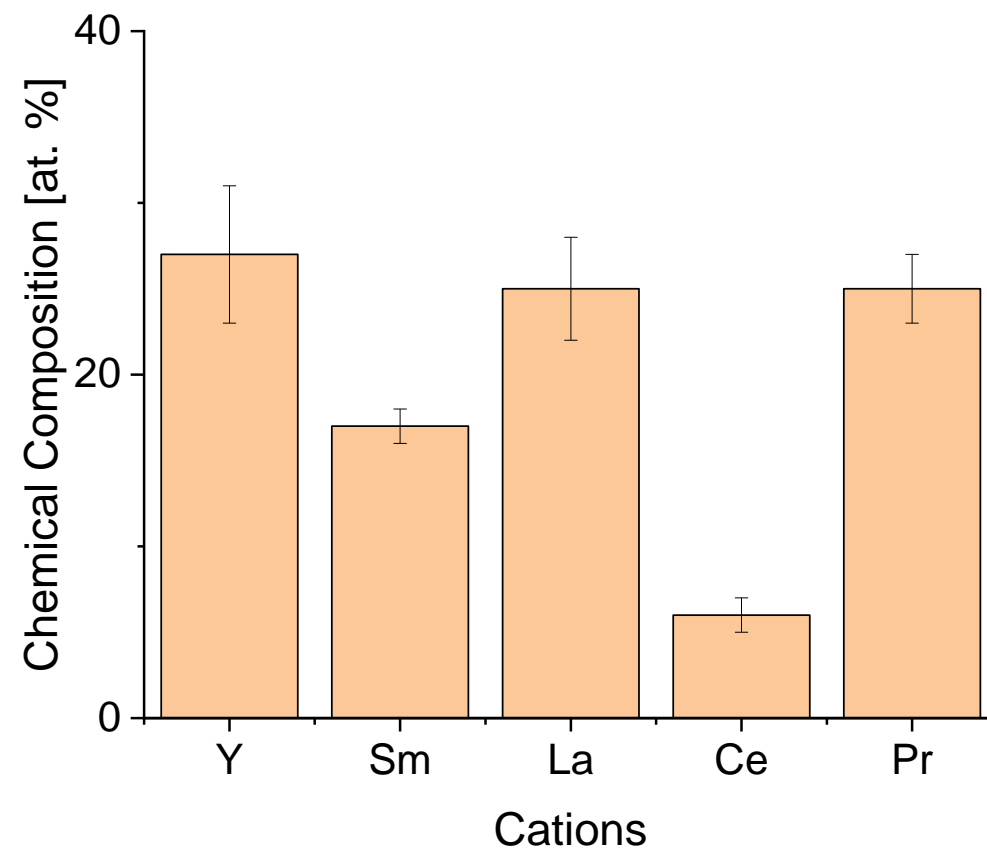




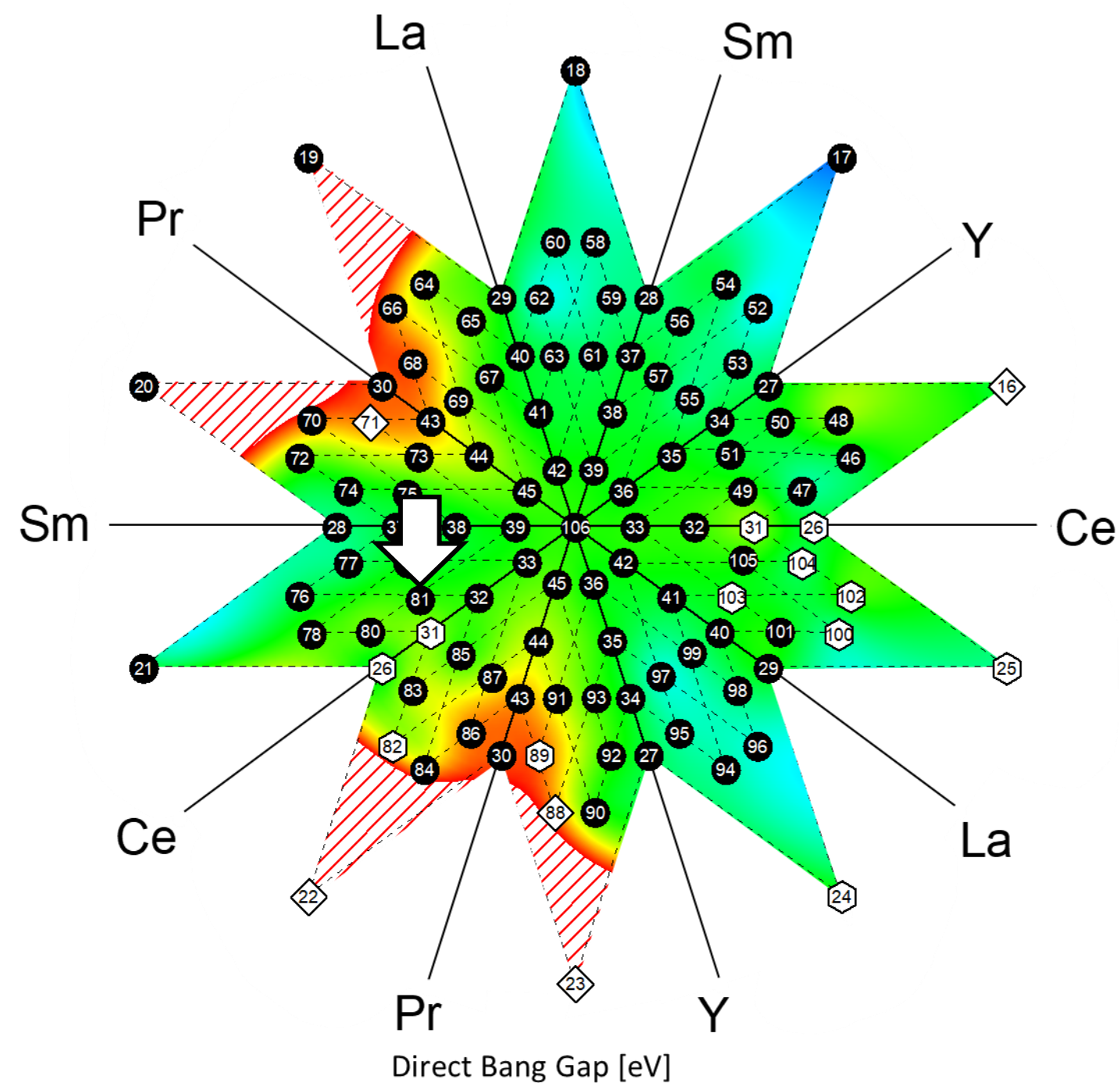
# Sample 80



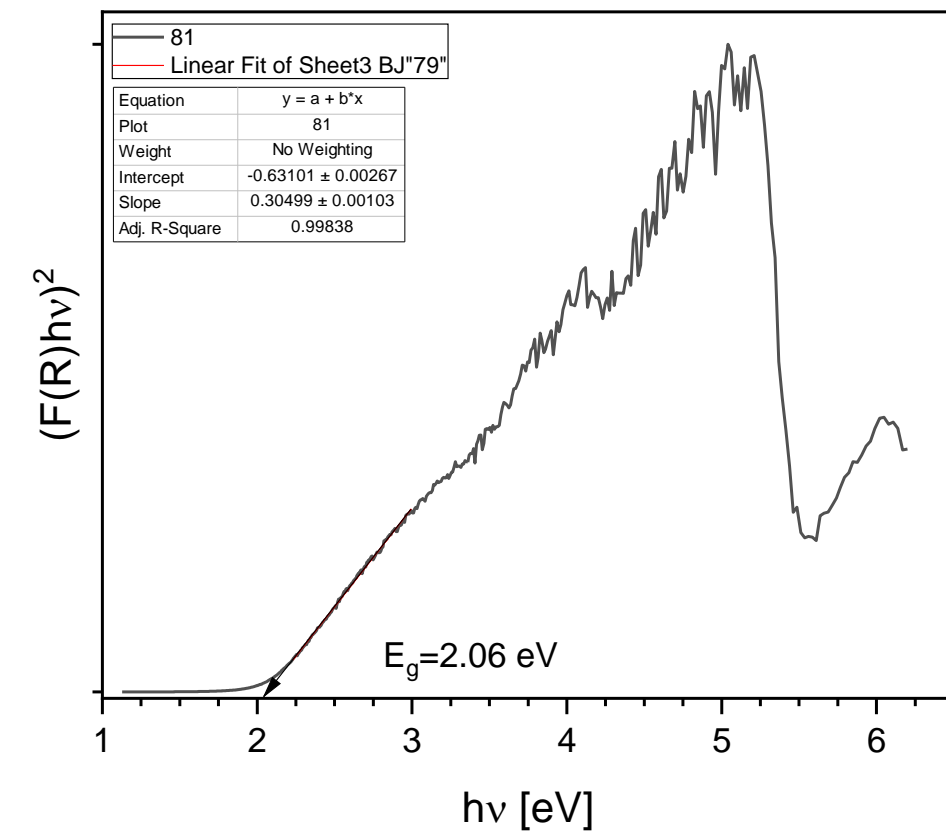
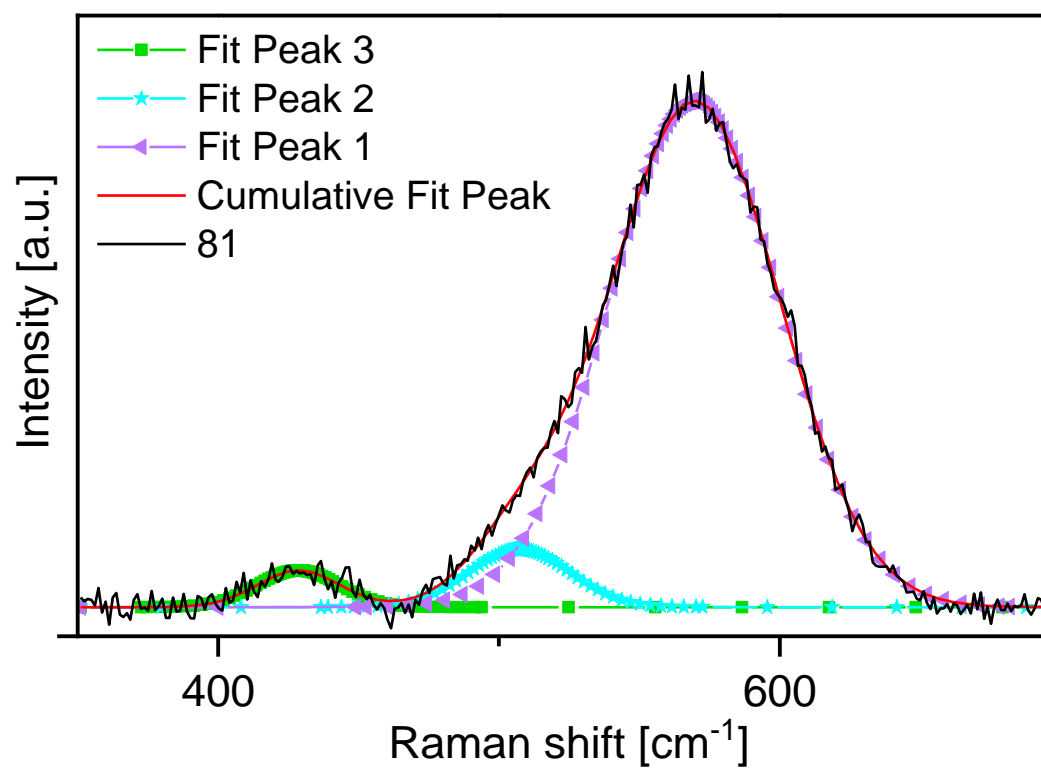
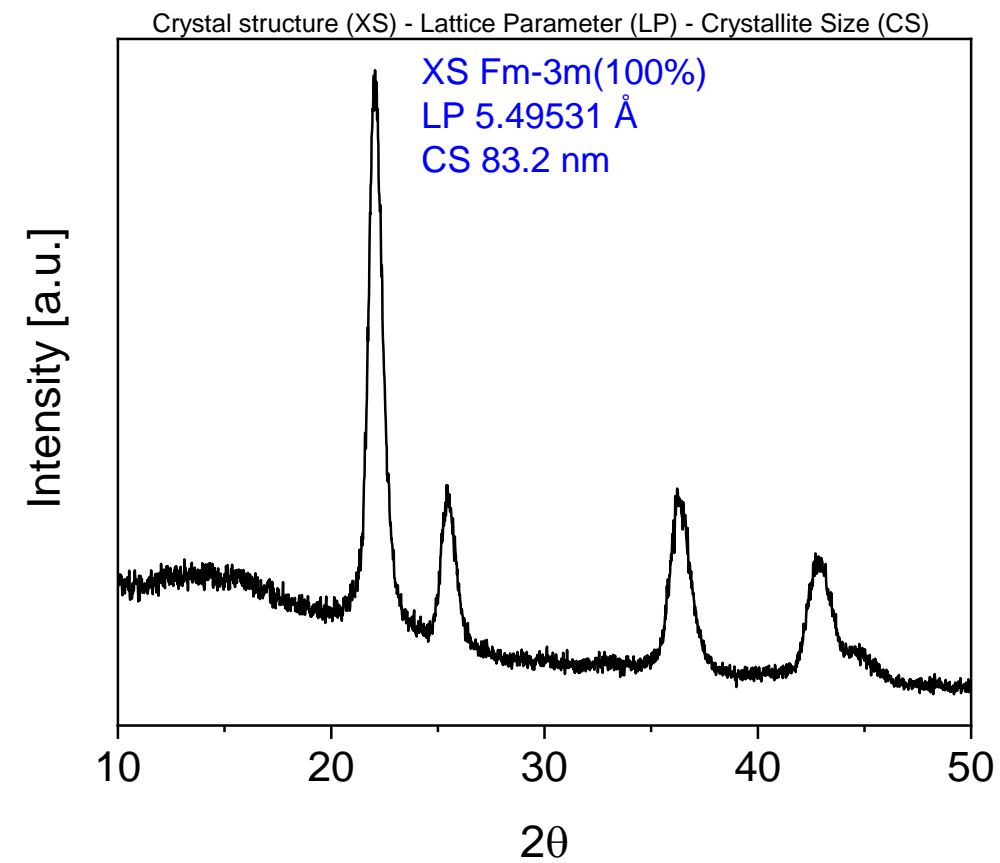
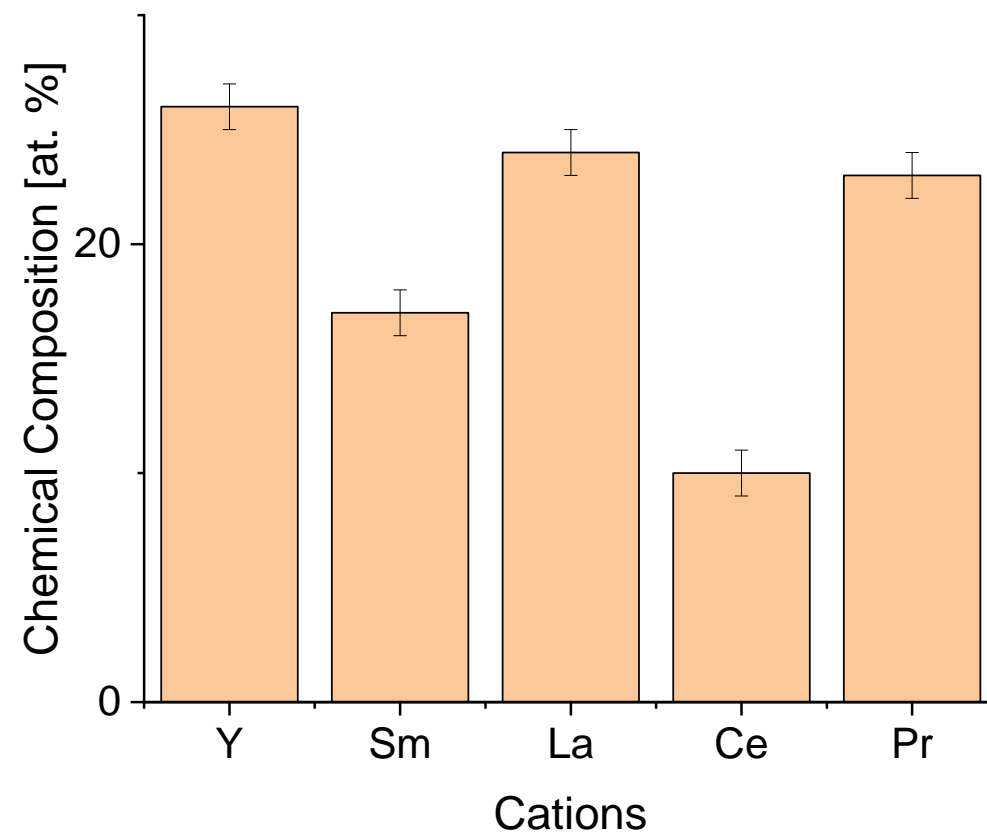
○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◇ Multiple Phase



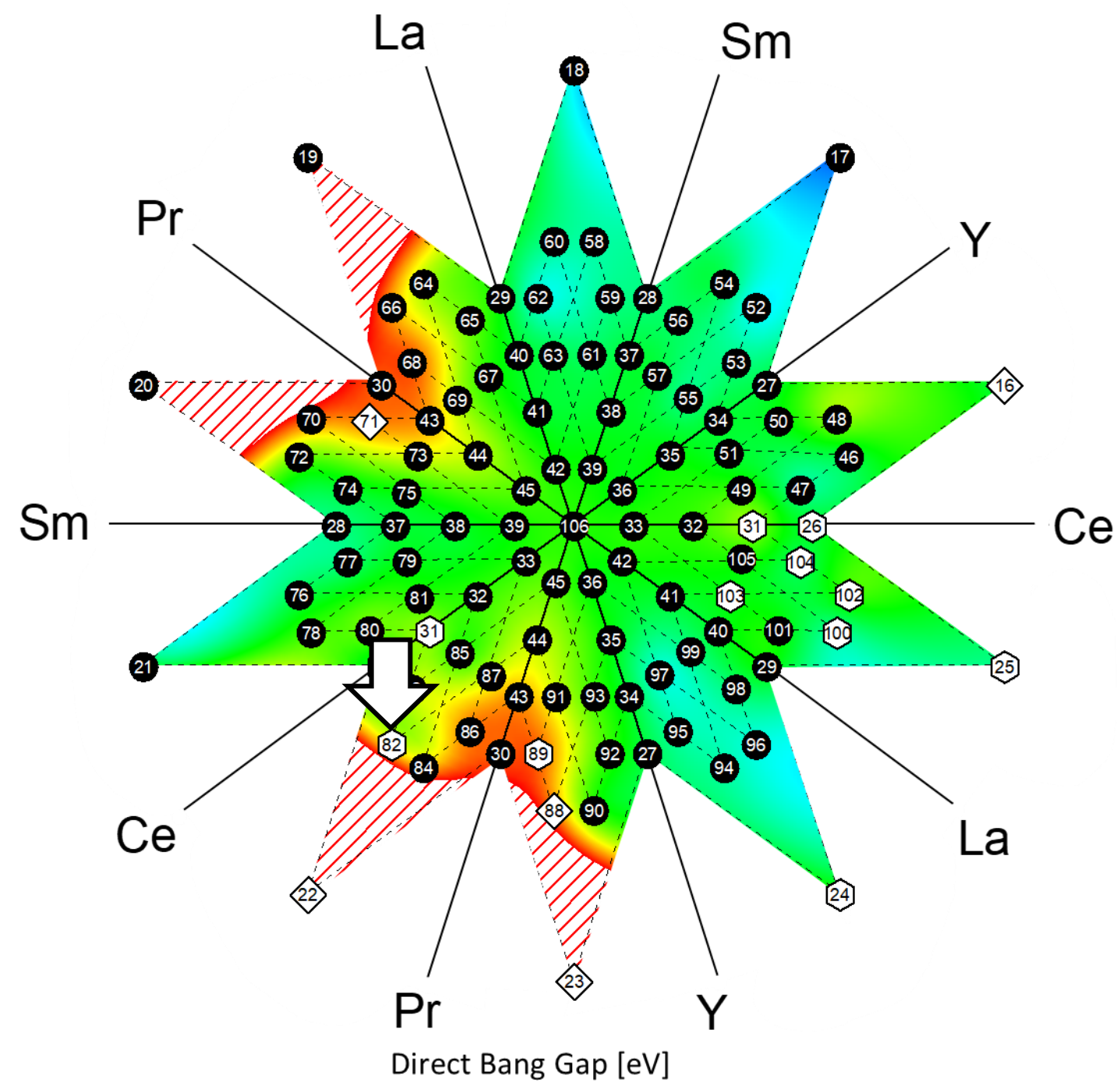
# Sample 81



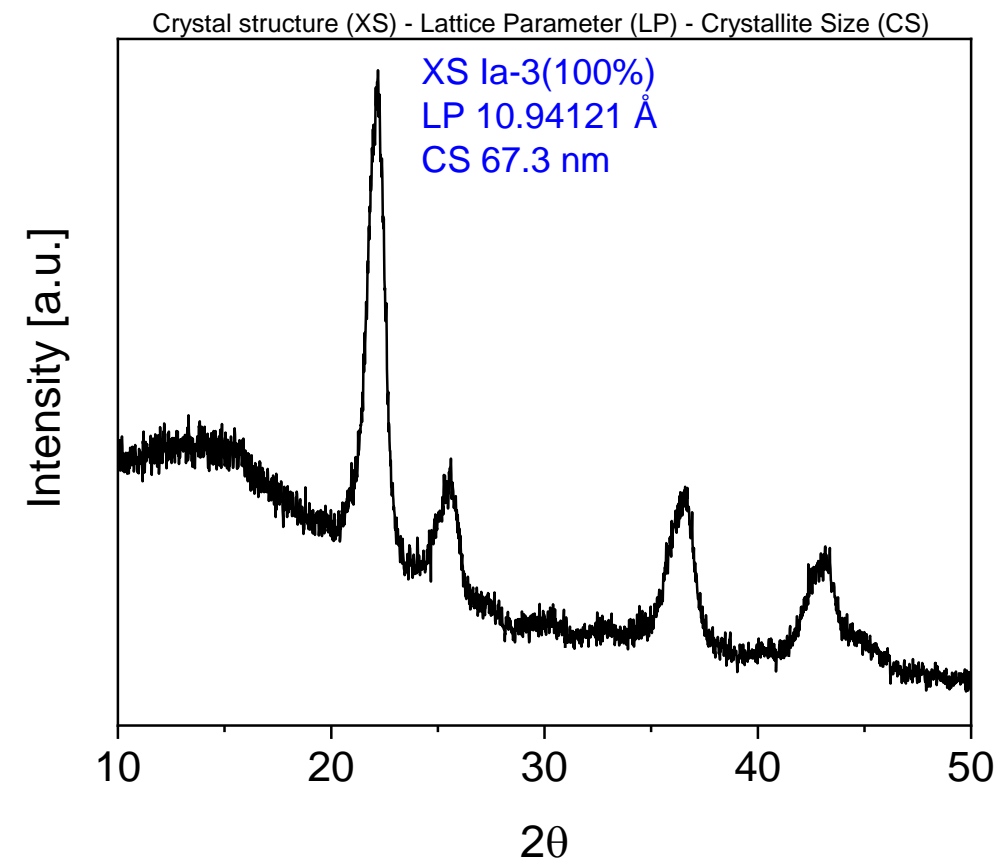
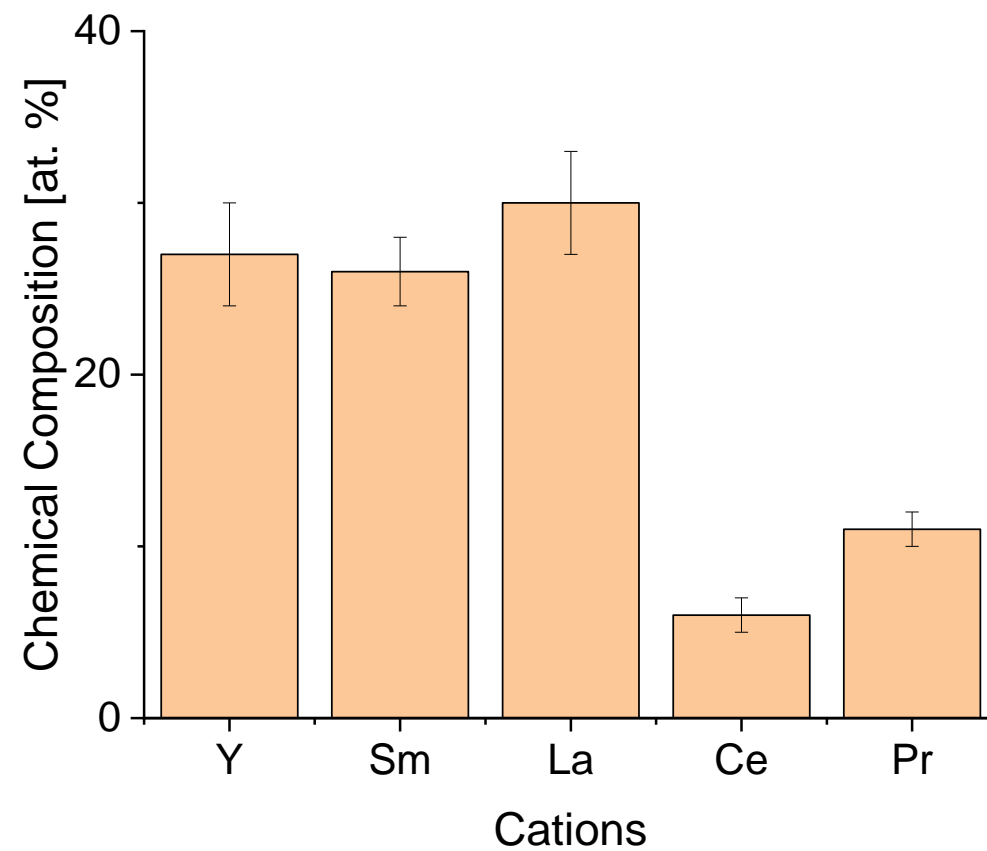
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



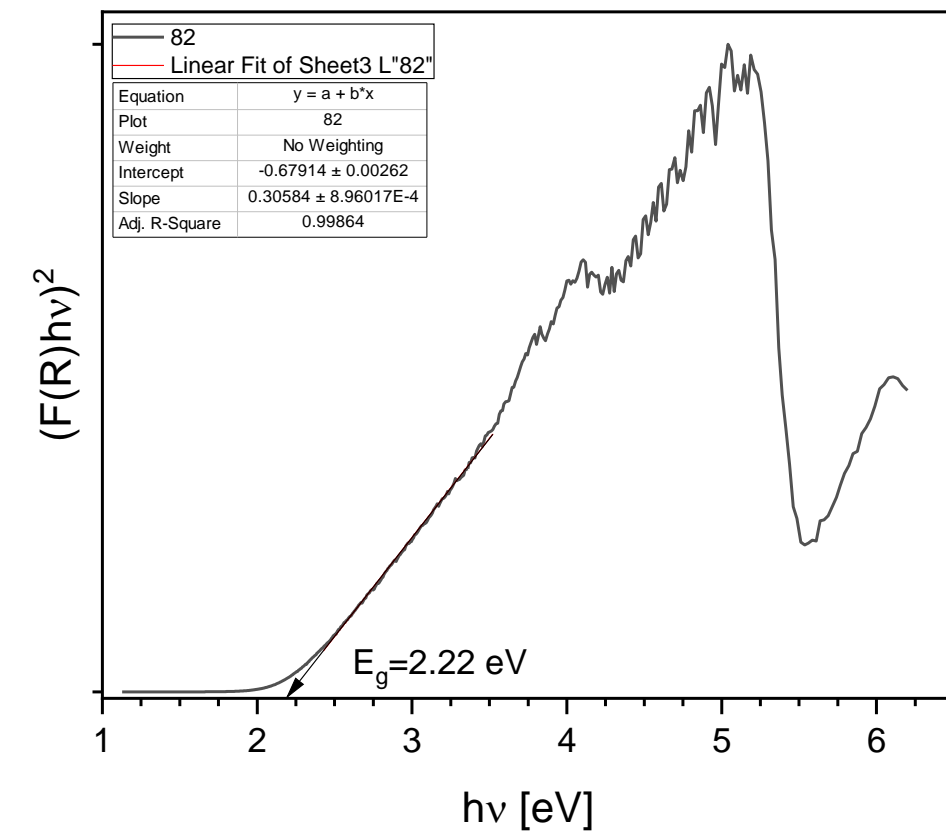
# Sample 82



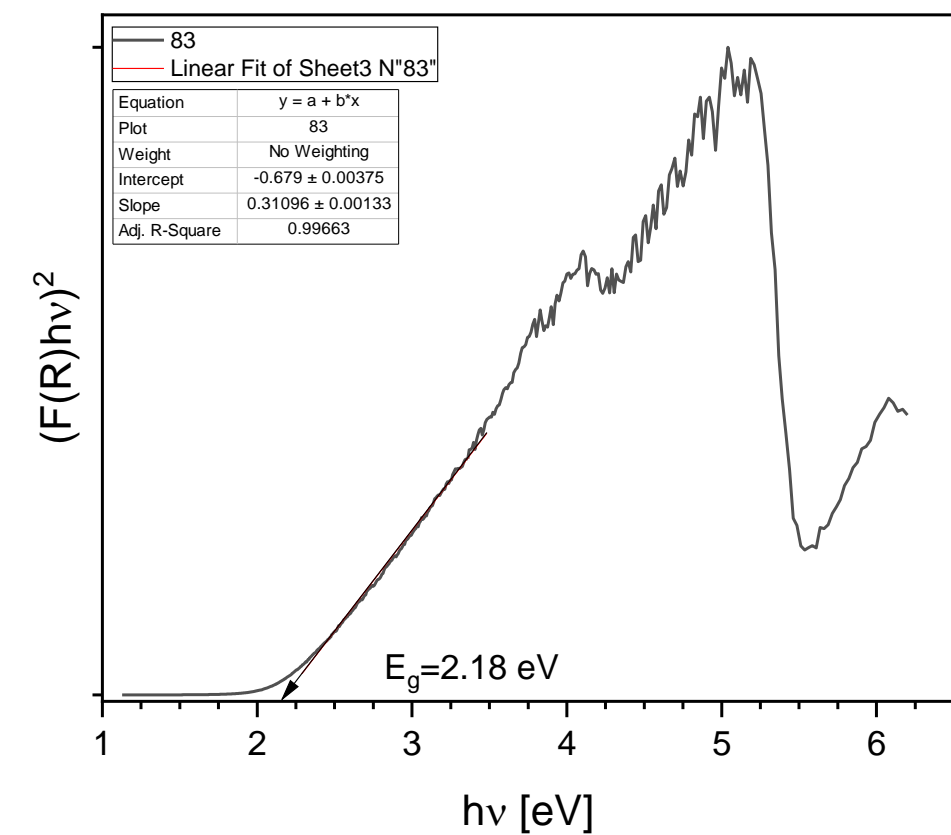
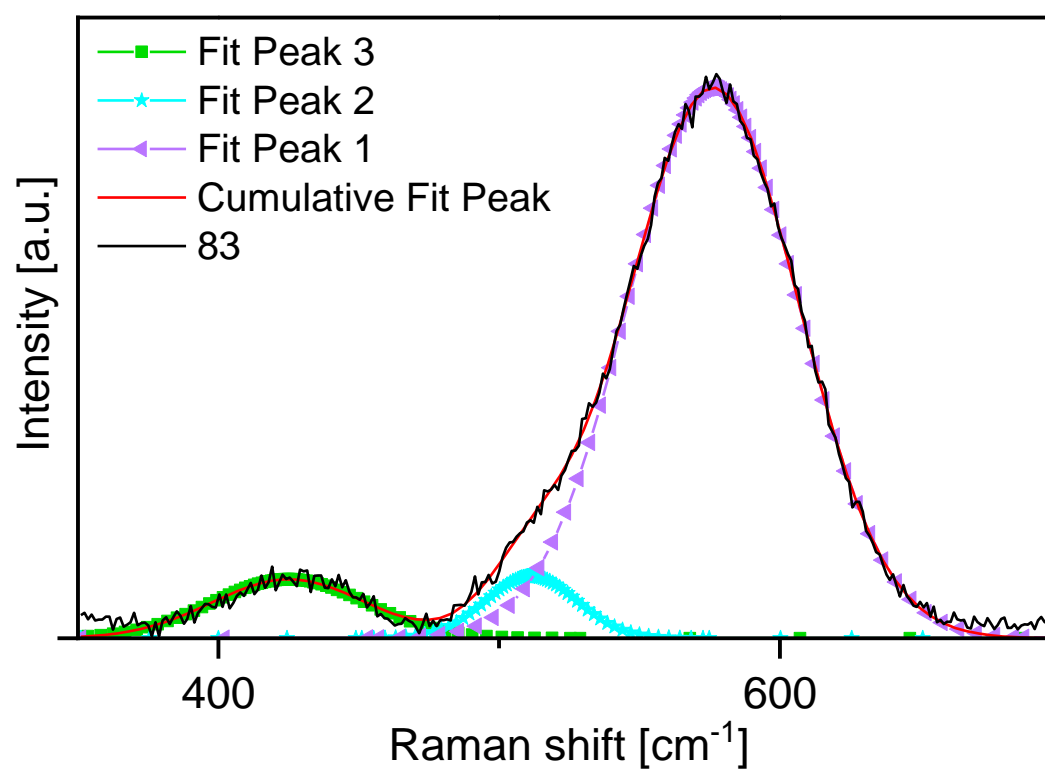
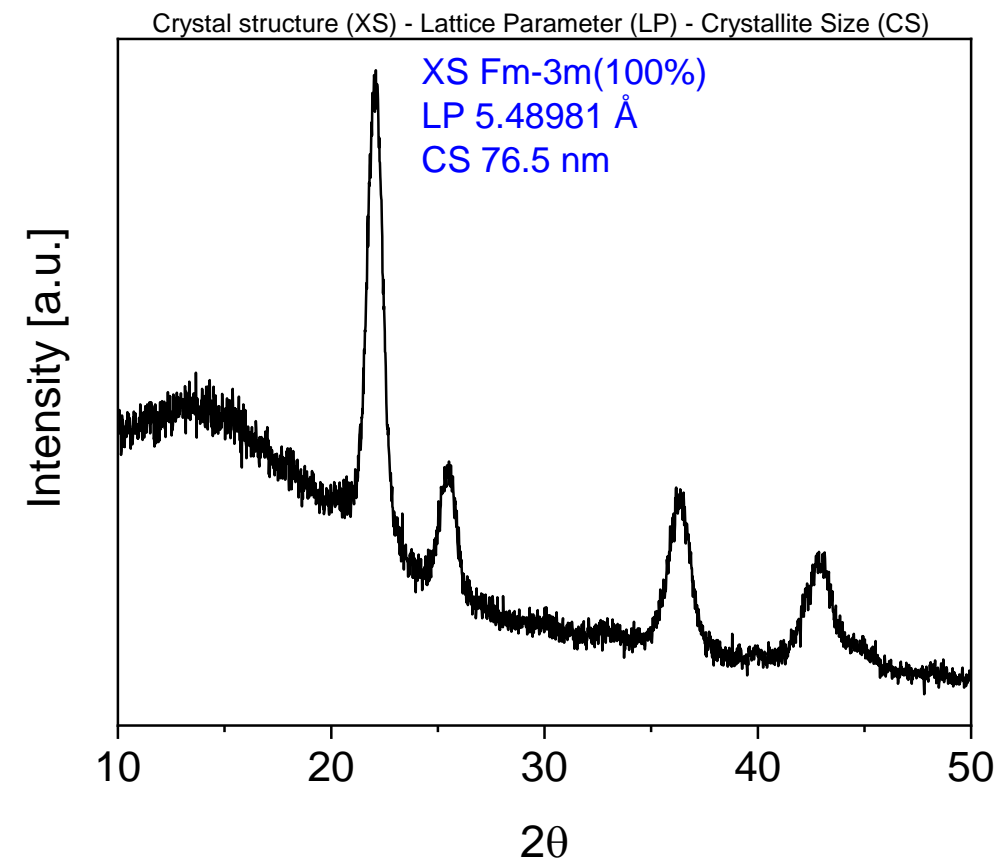
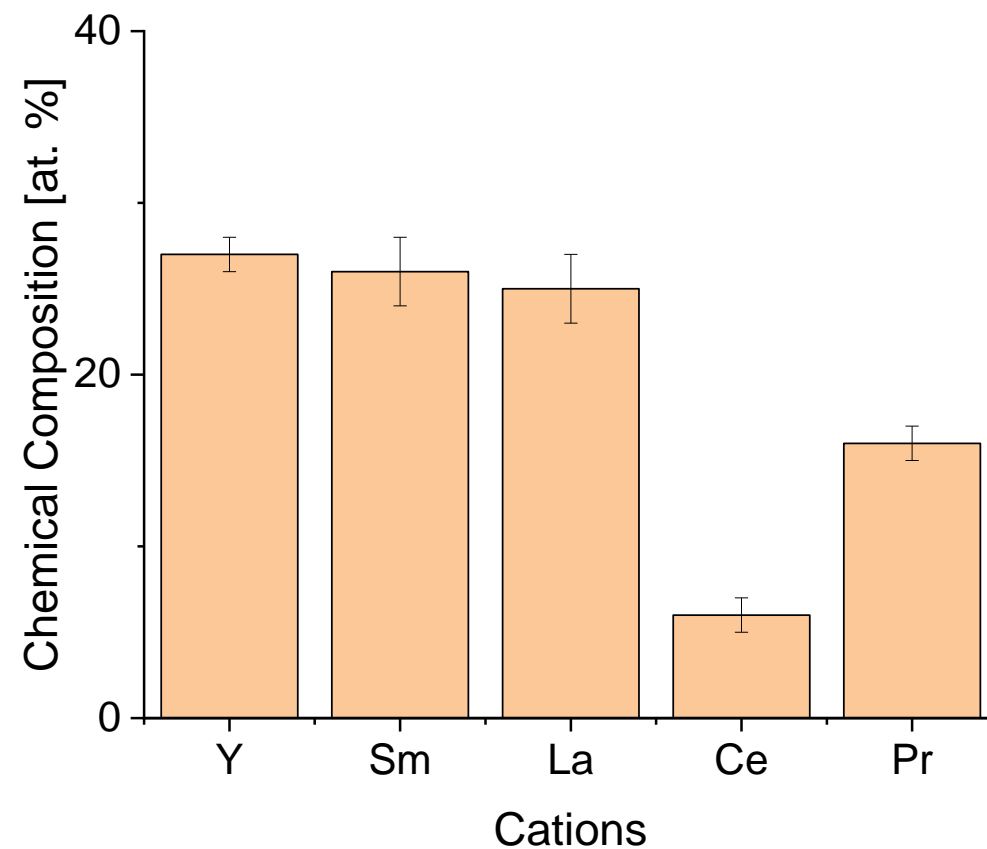
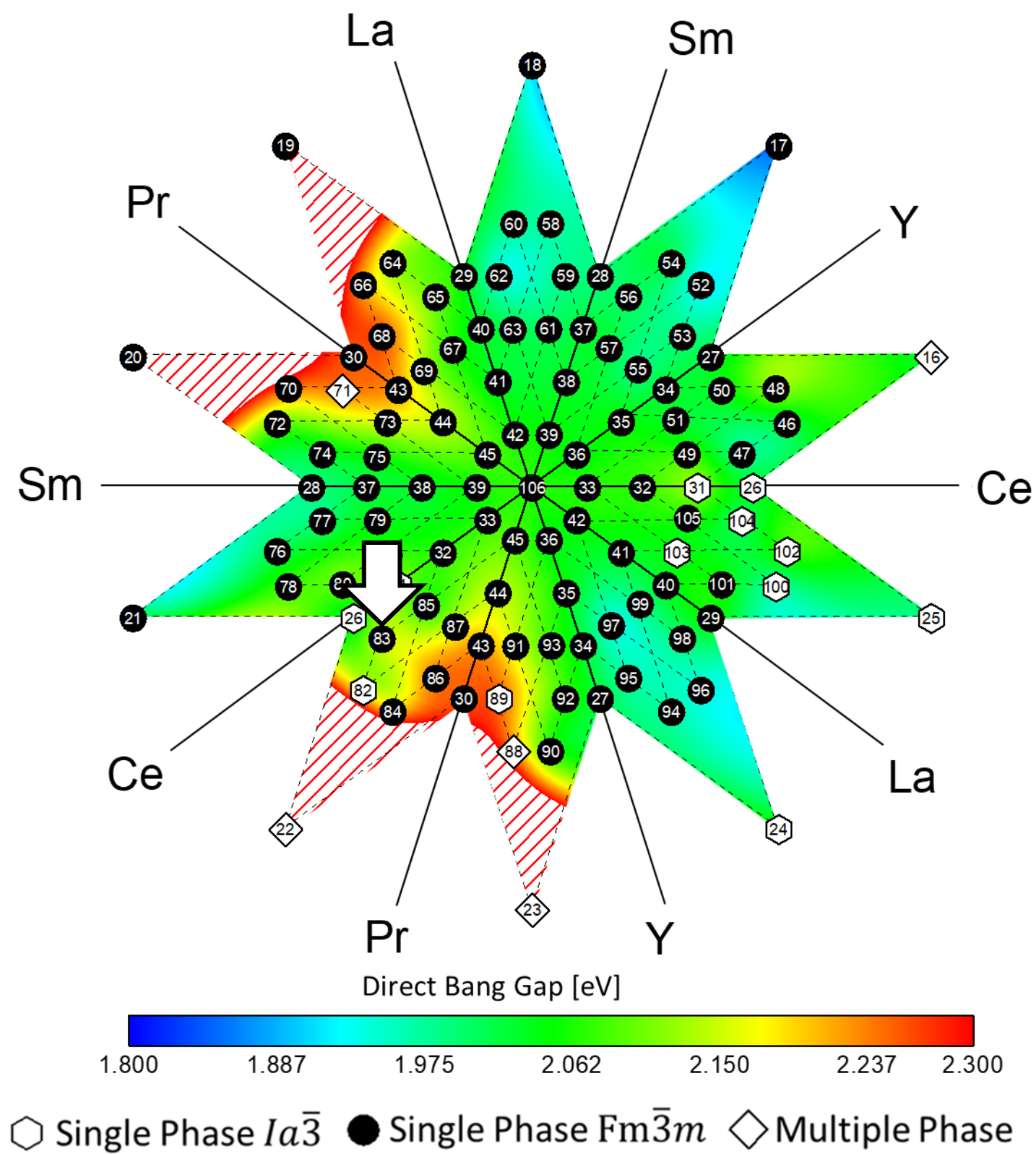
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



N.A.

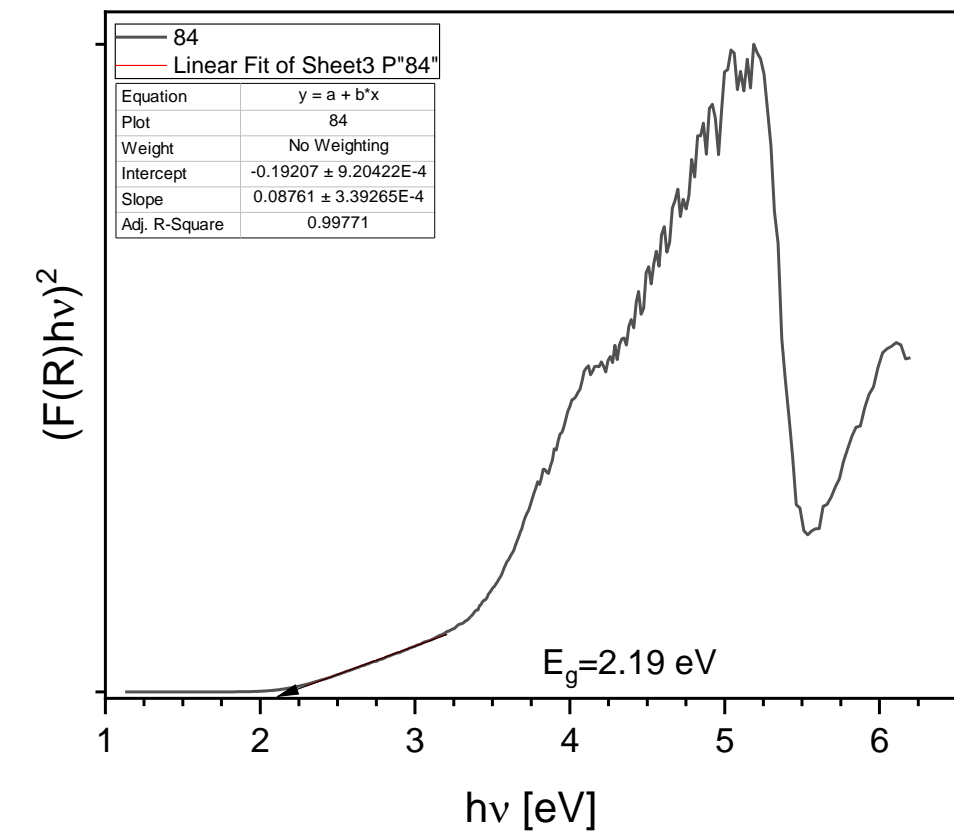
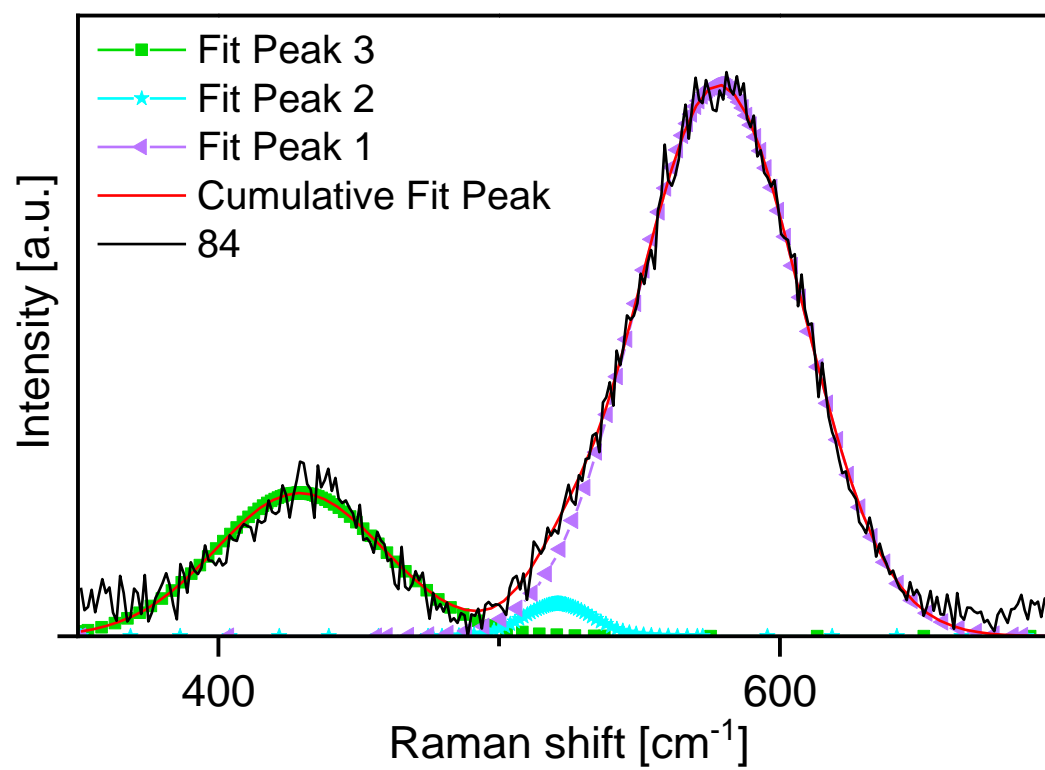
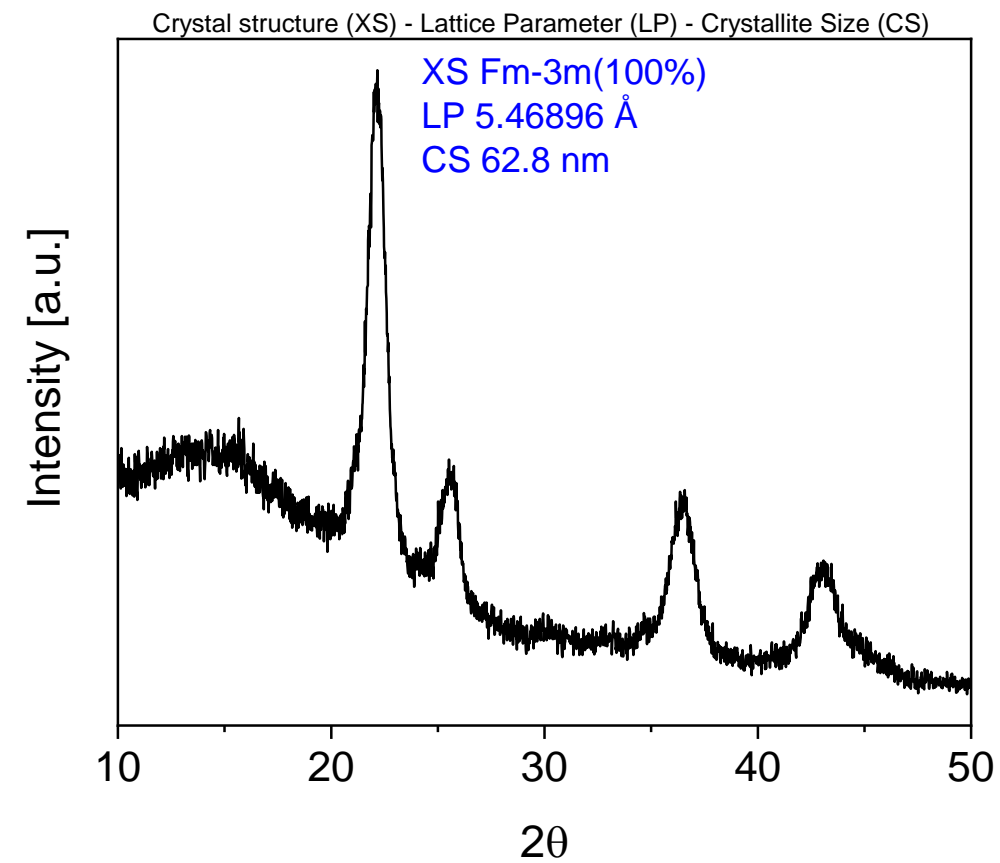
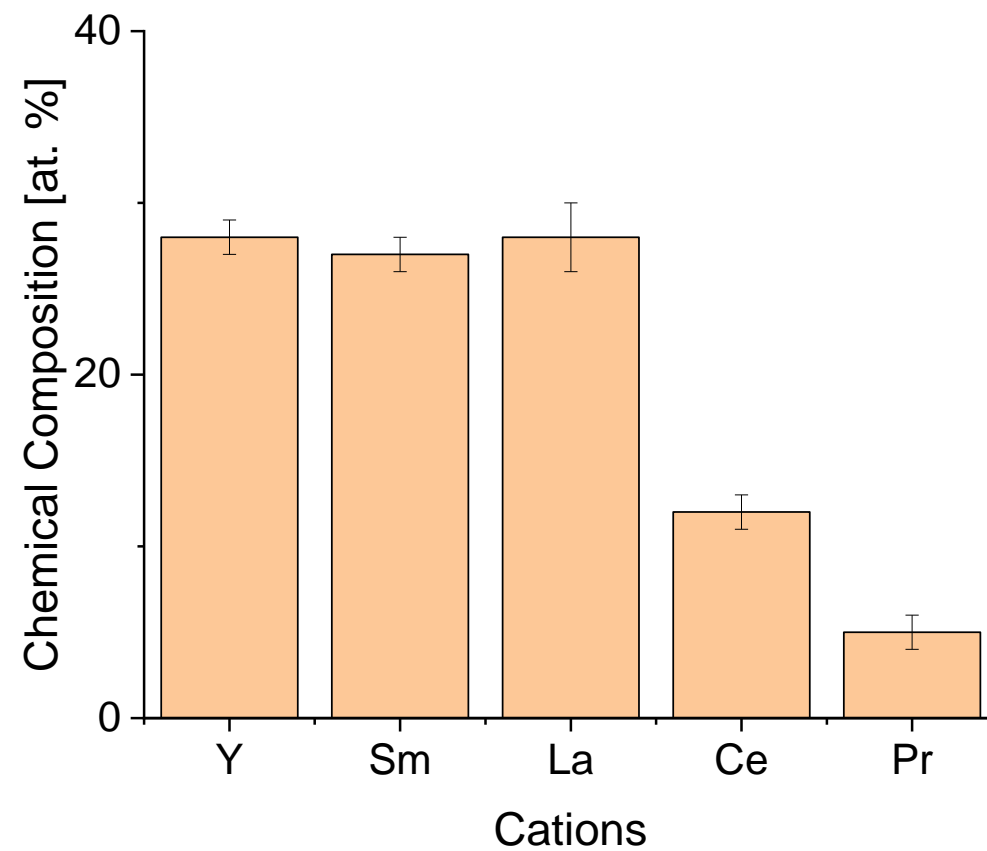
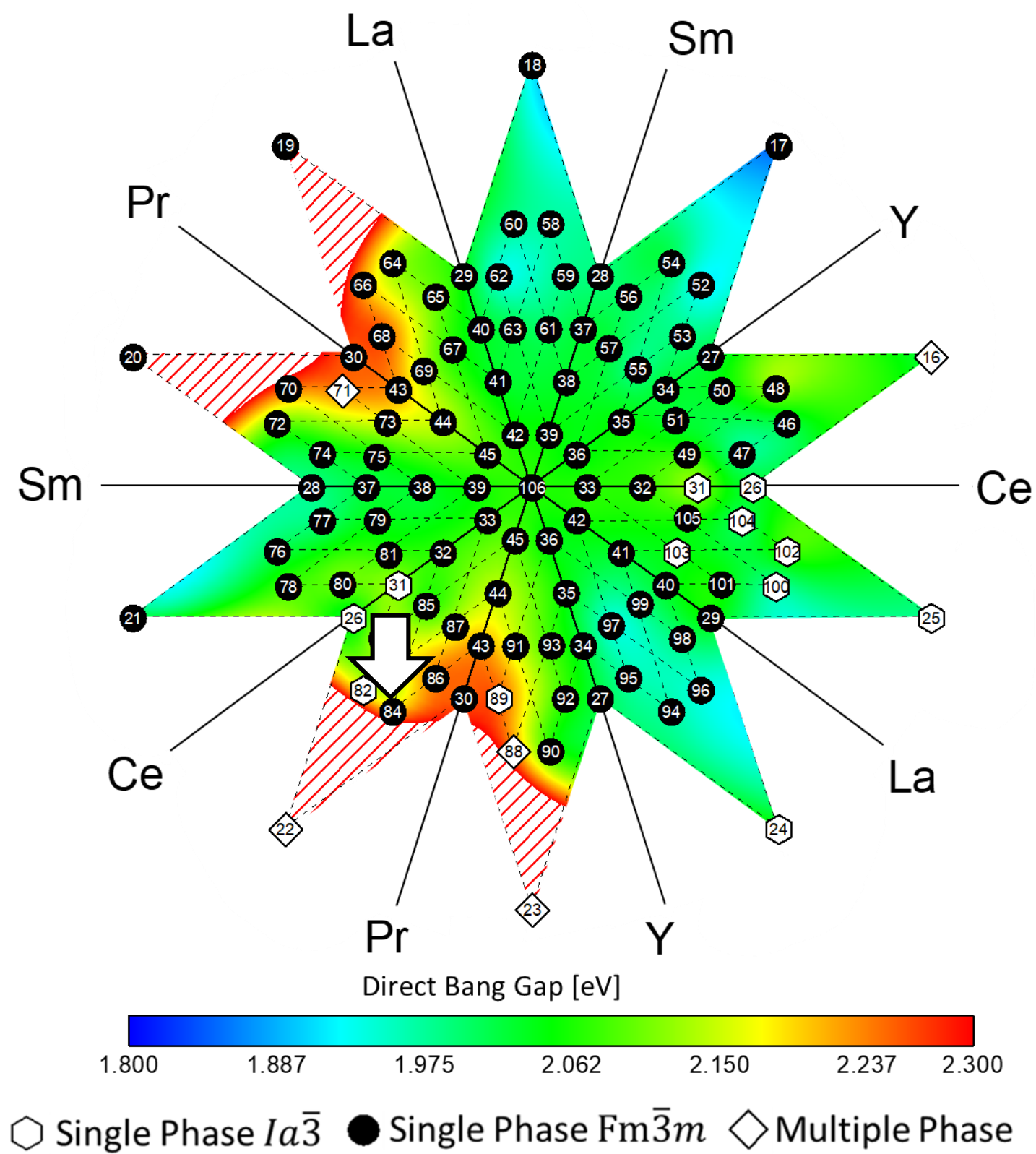


# Sample 83

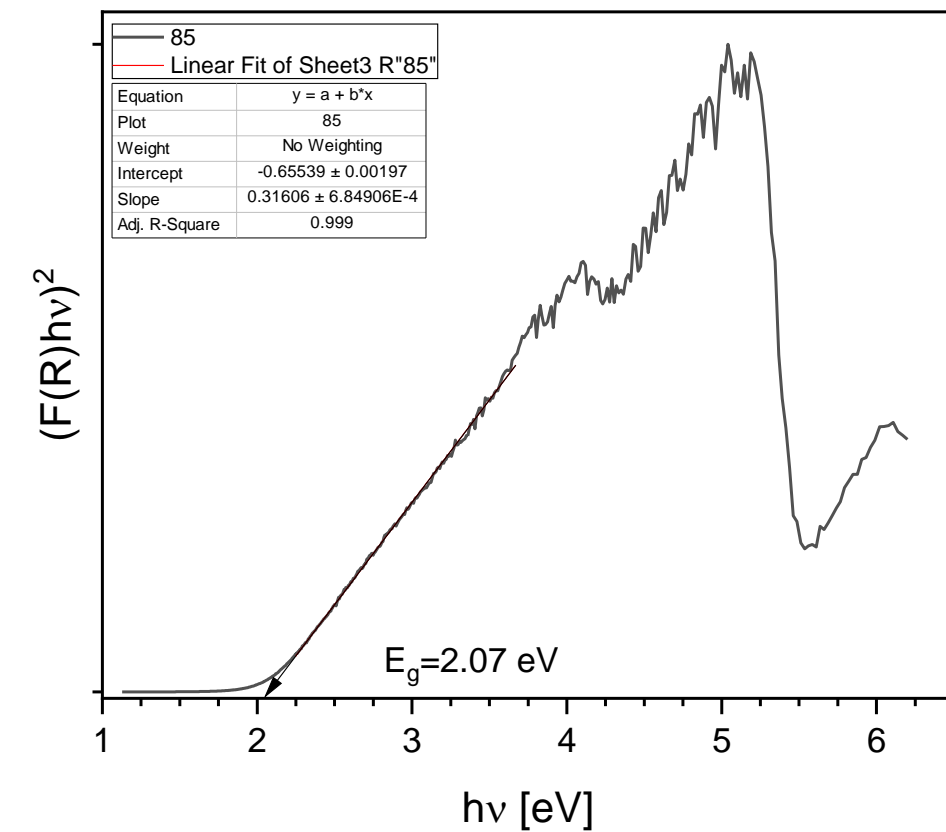
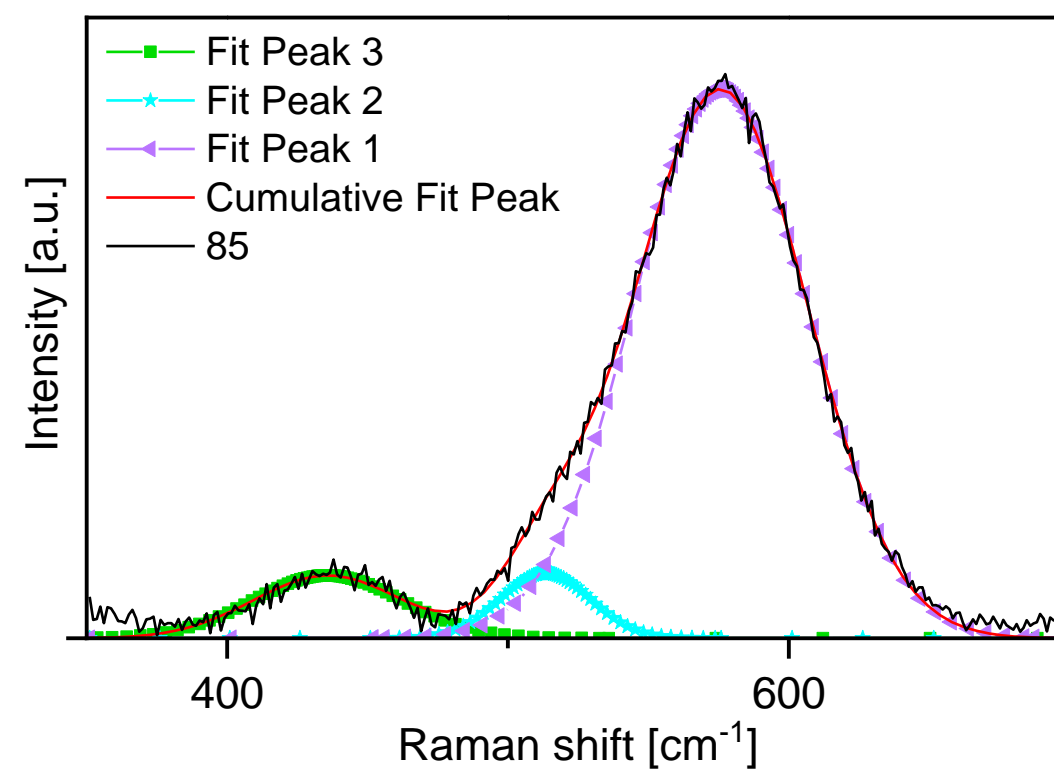
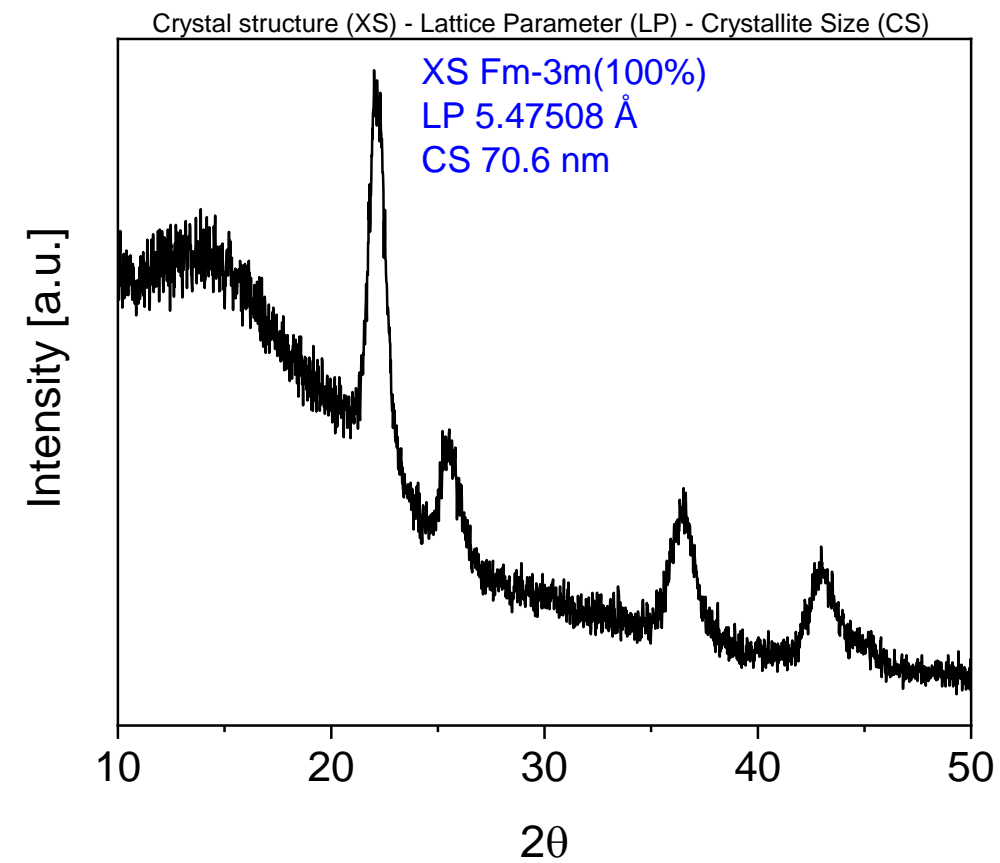
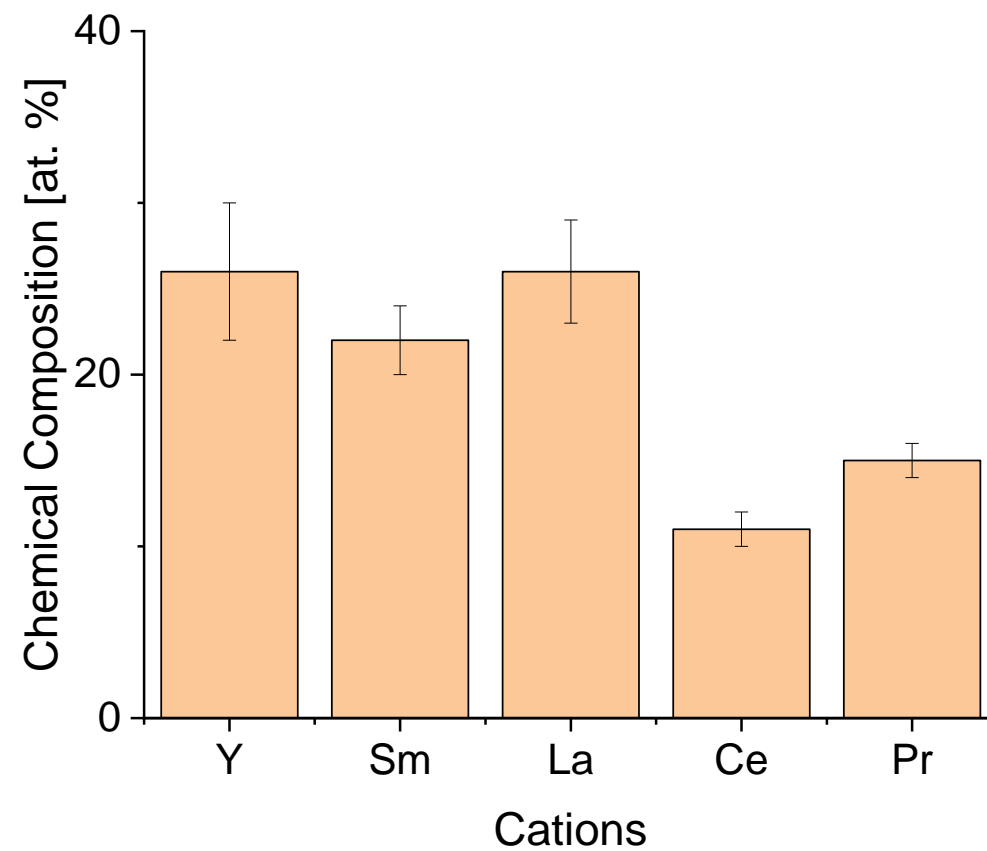
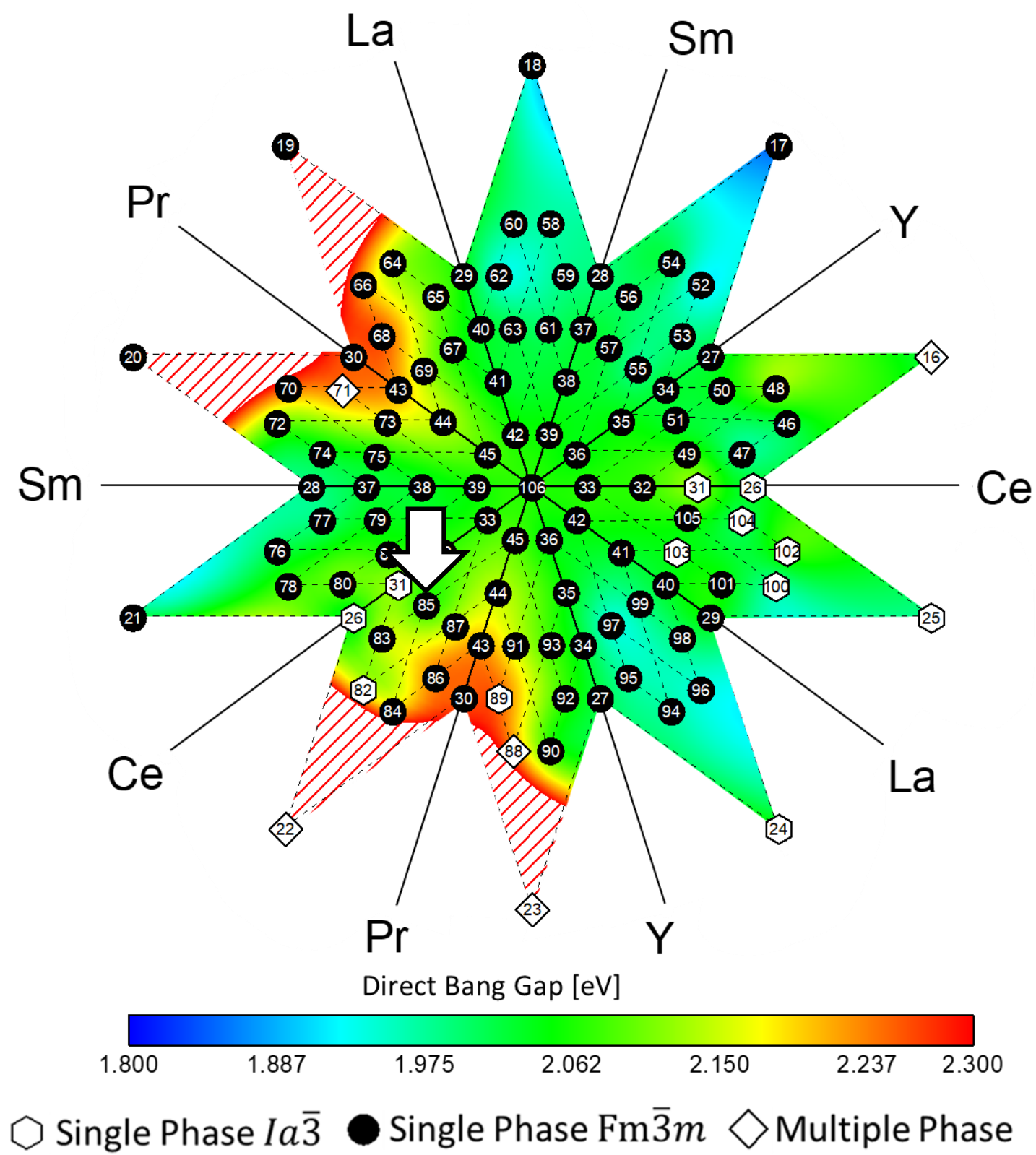




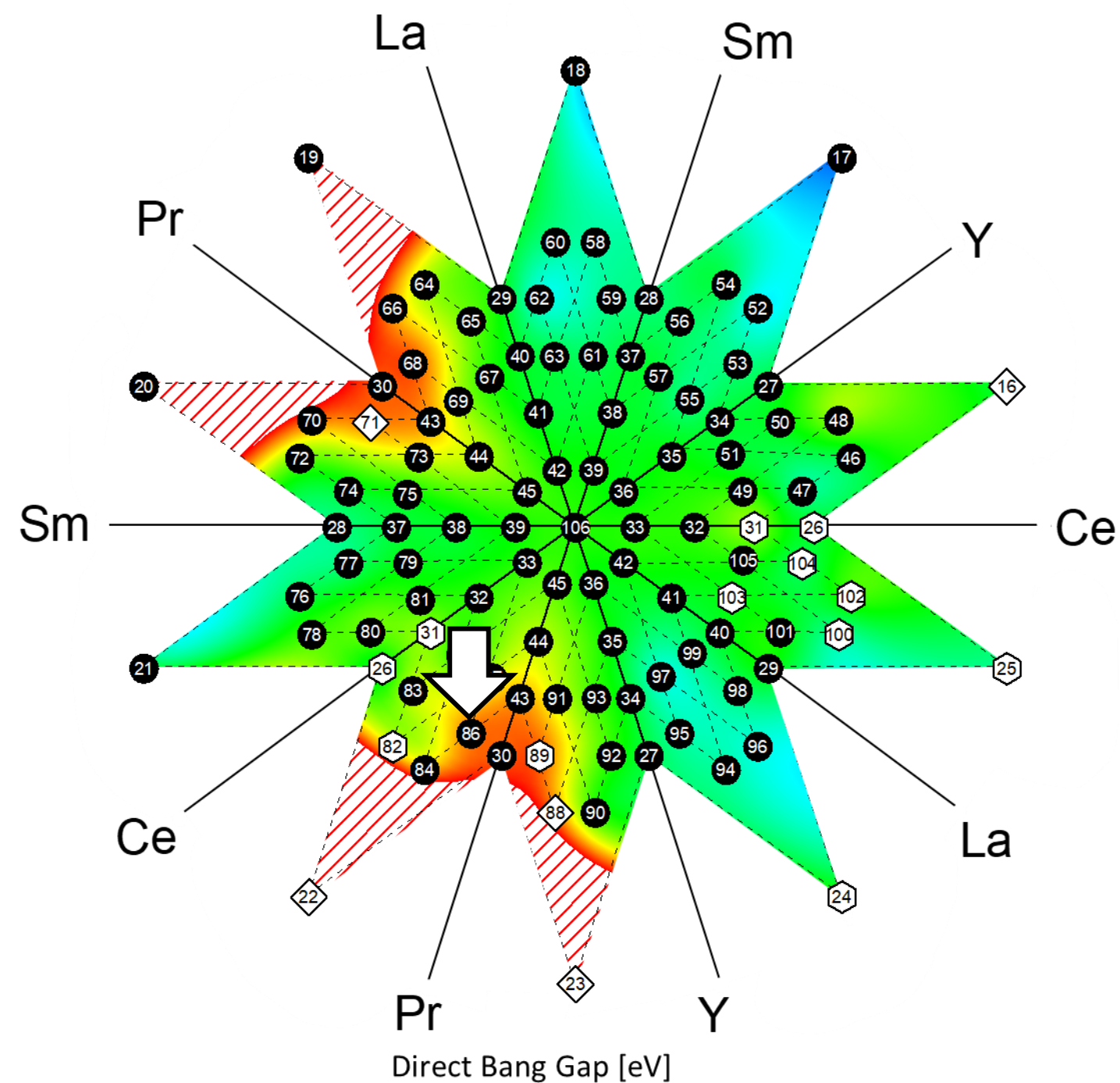
# Sample 84



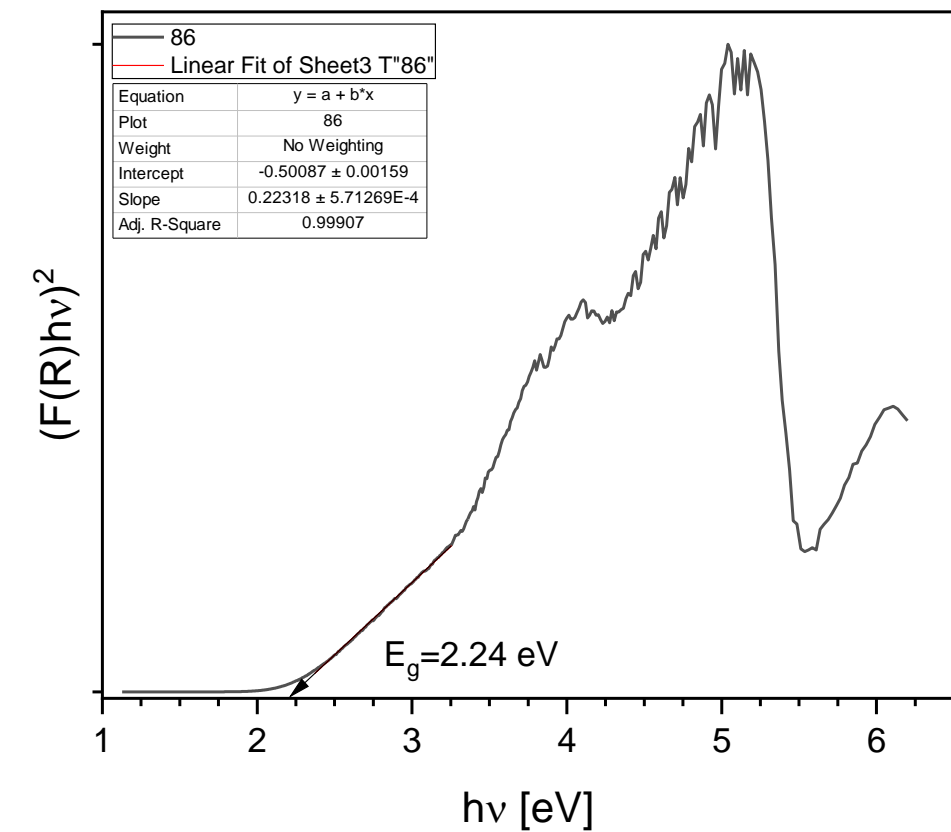
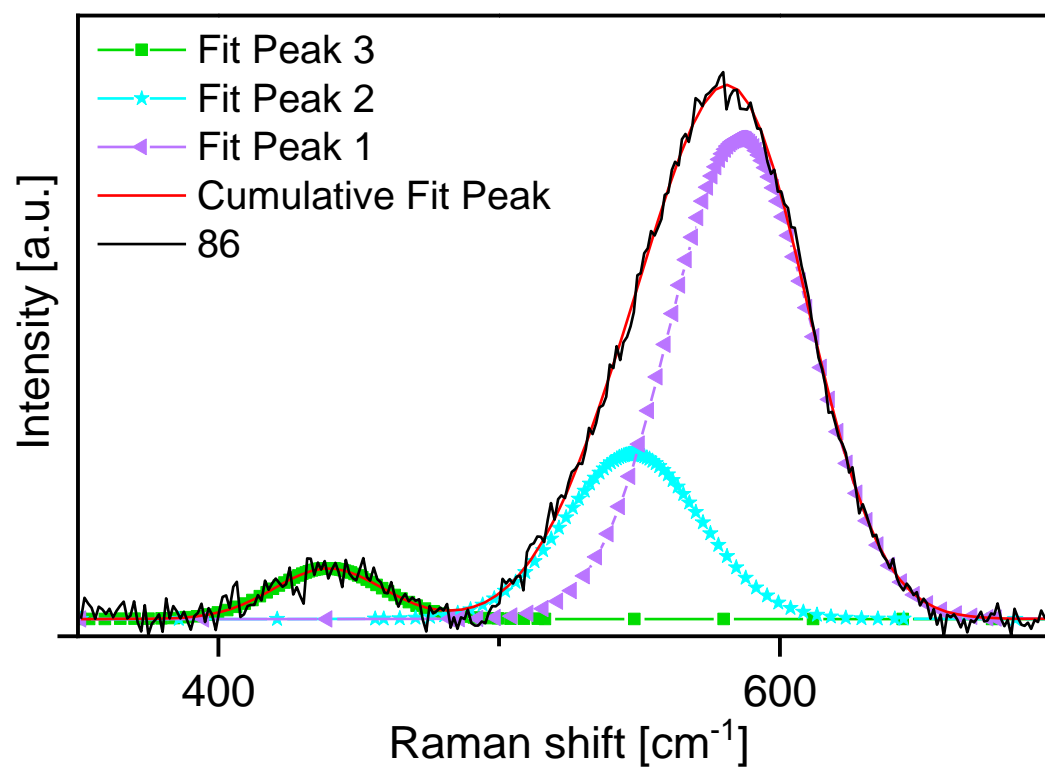
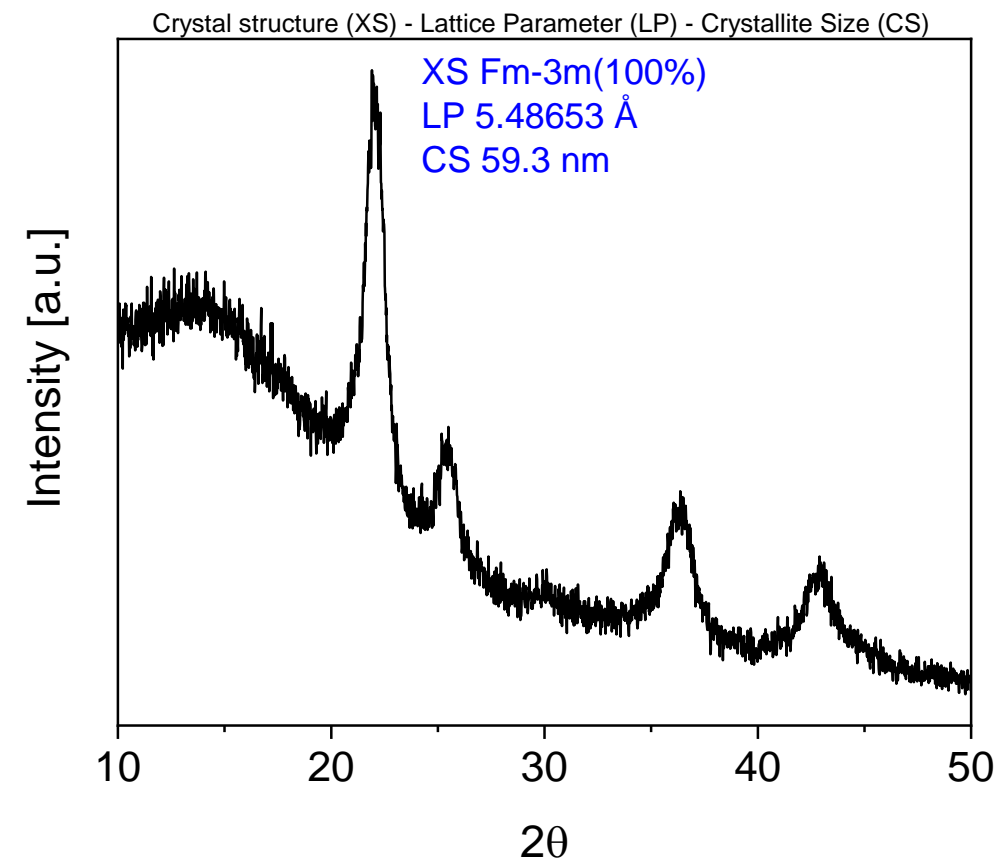
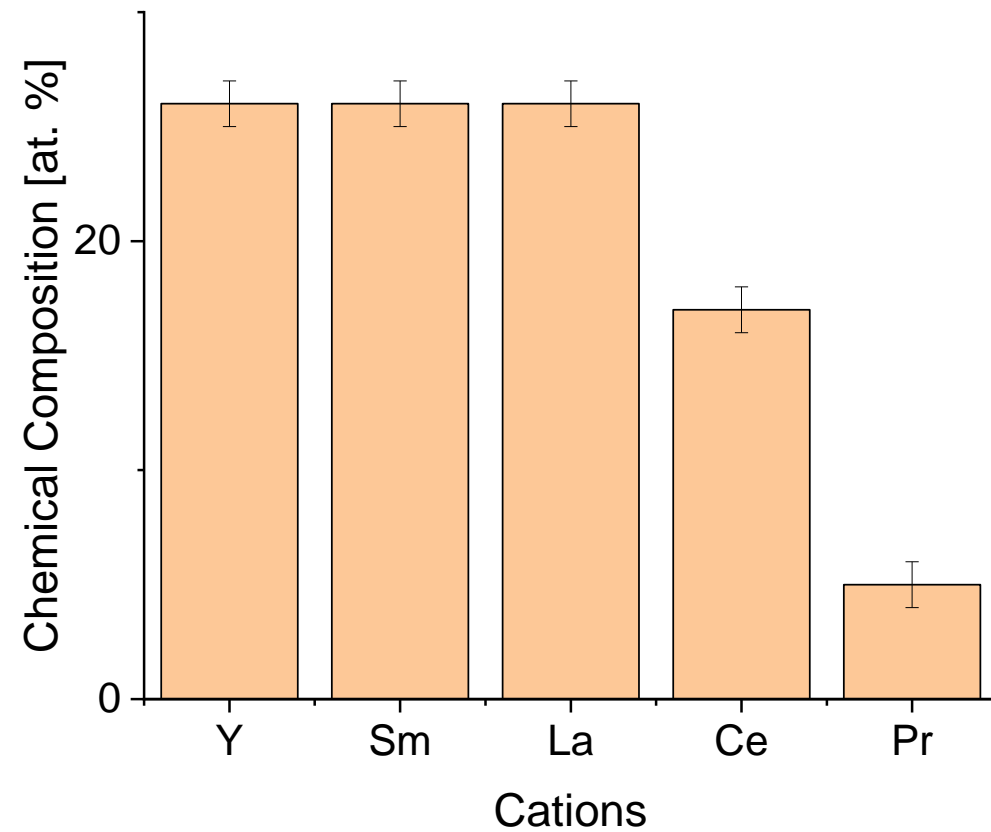
# Sample 85



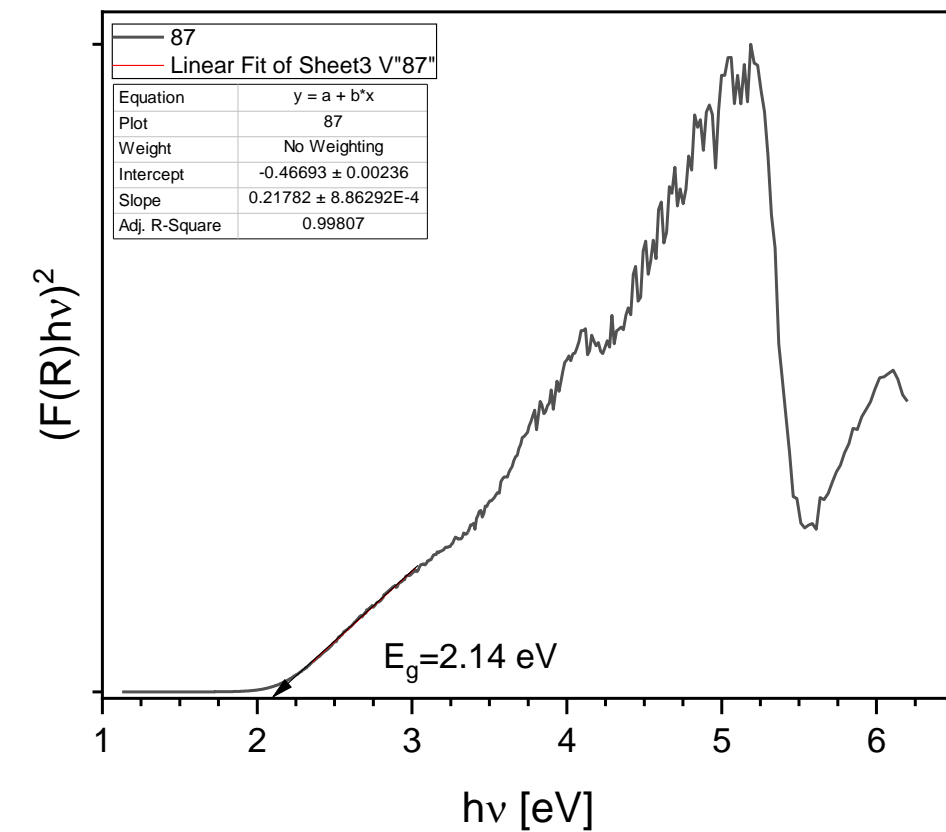
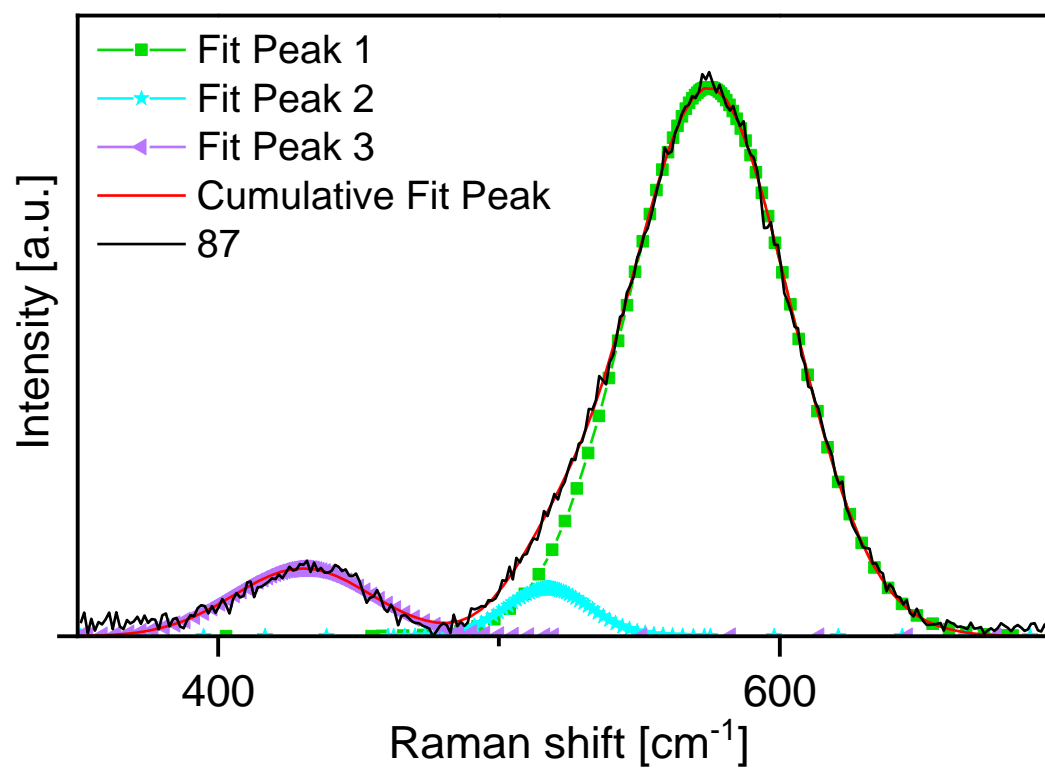
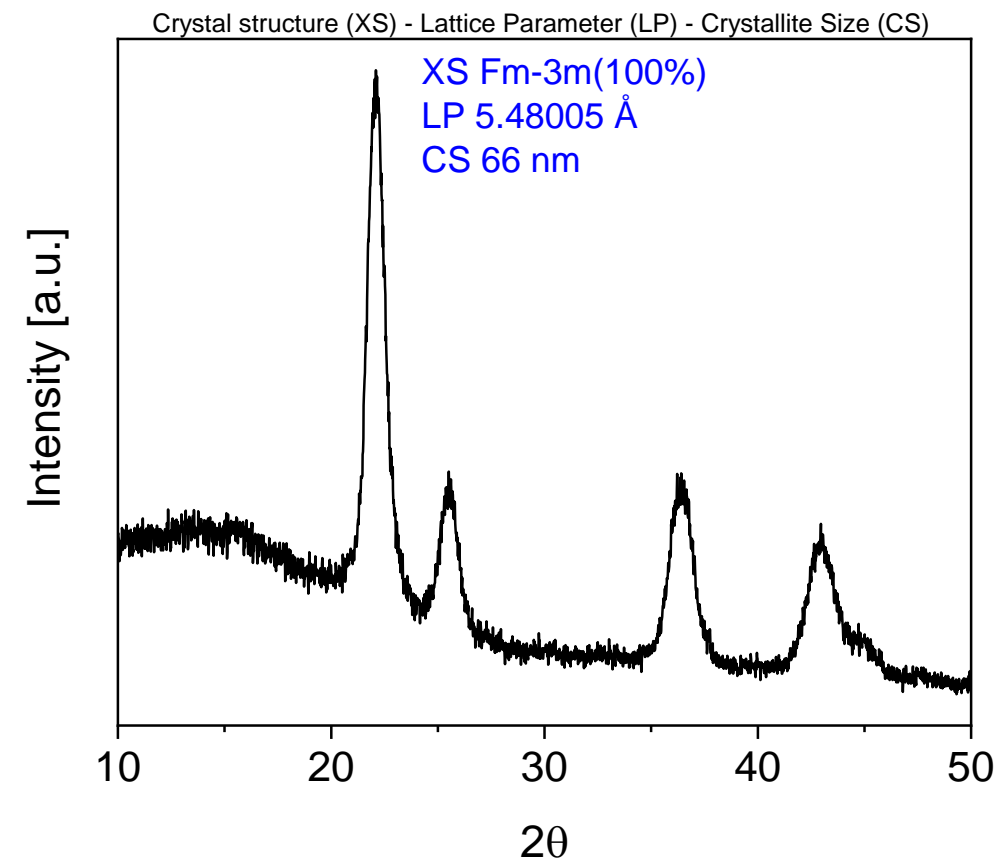
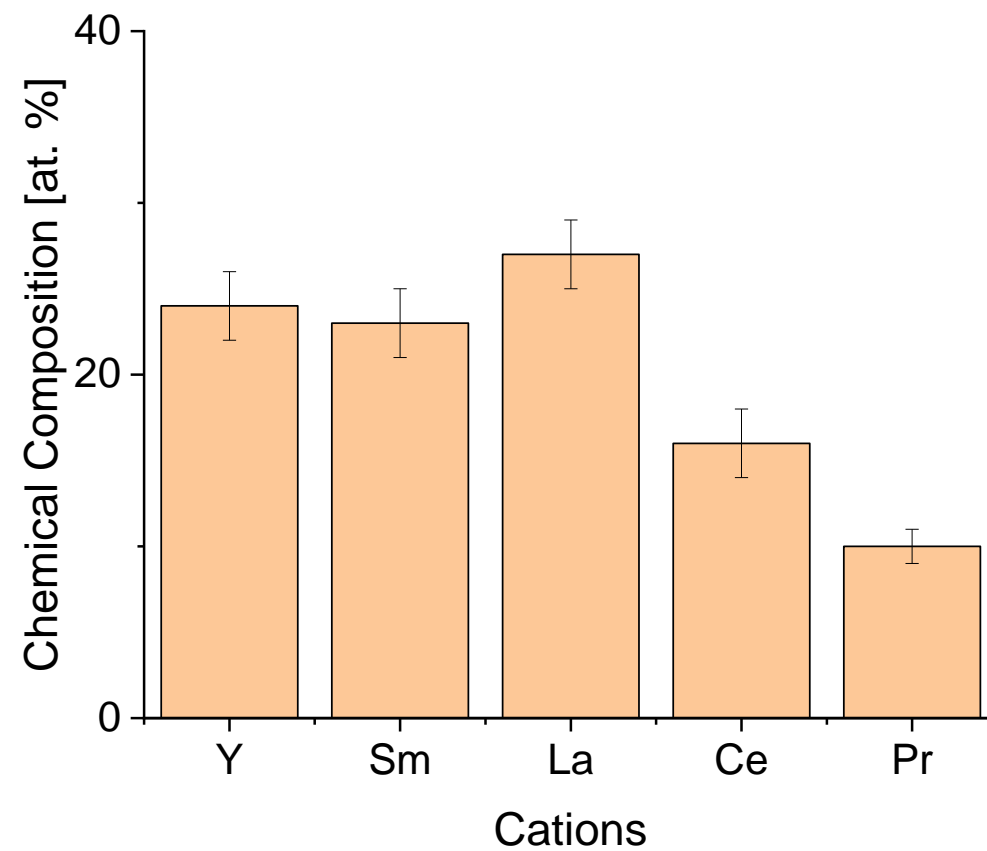
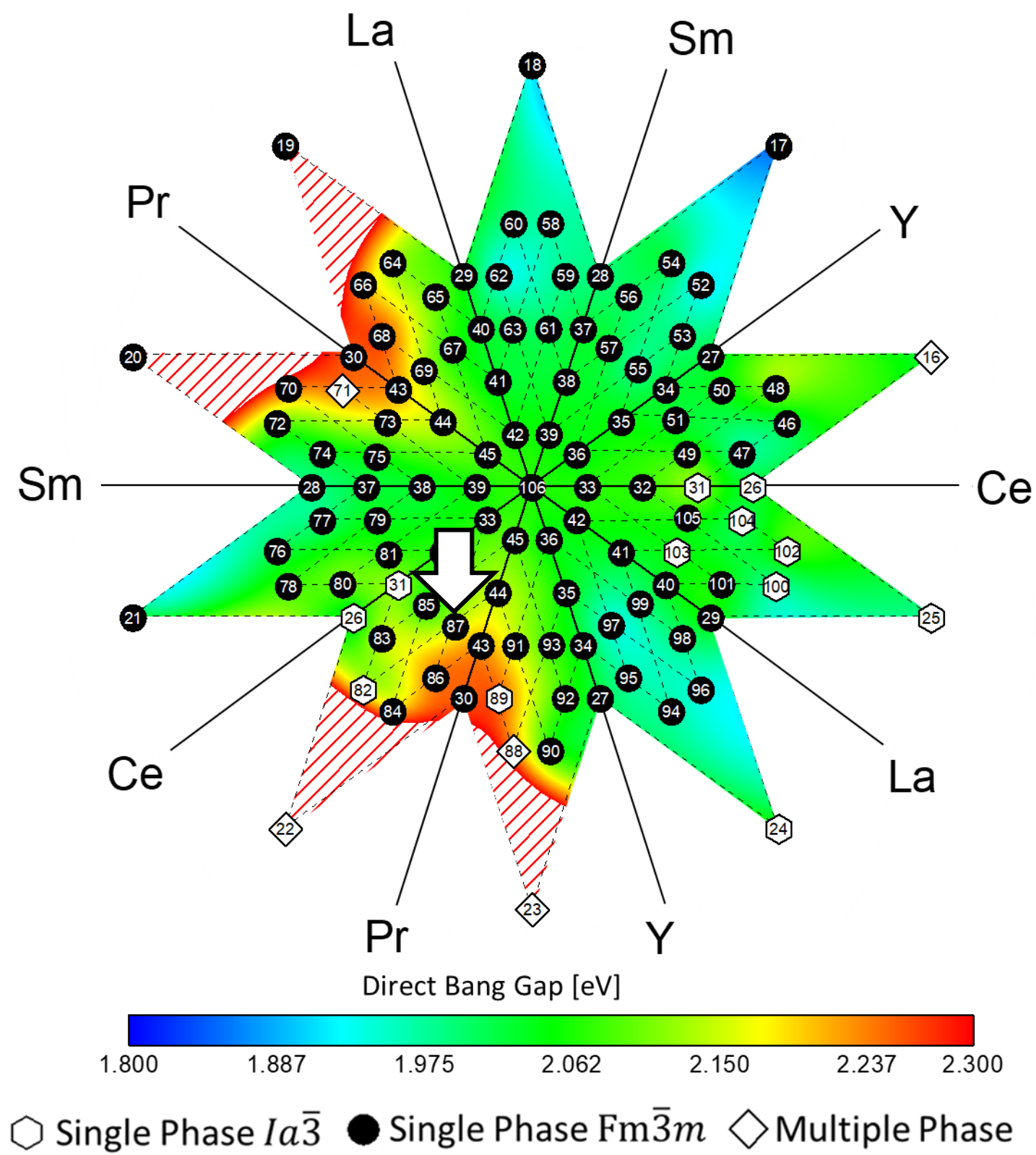
# Sample 86



○ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◇ Multiple Phase

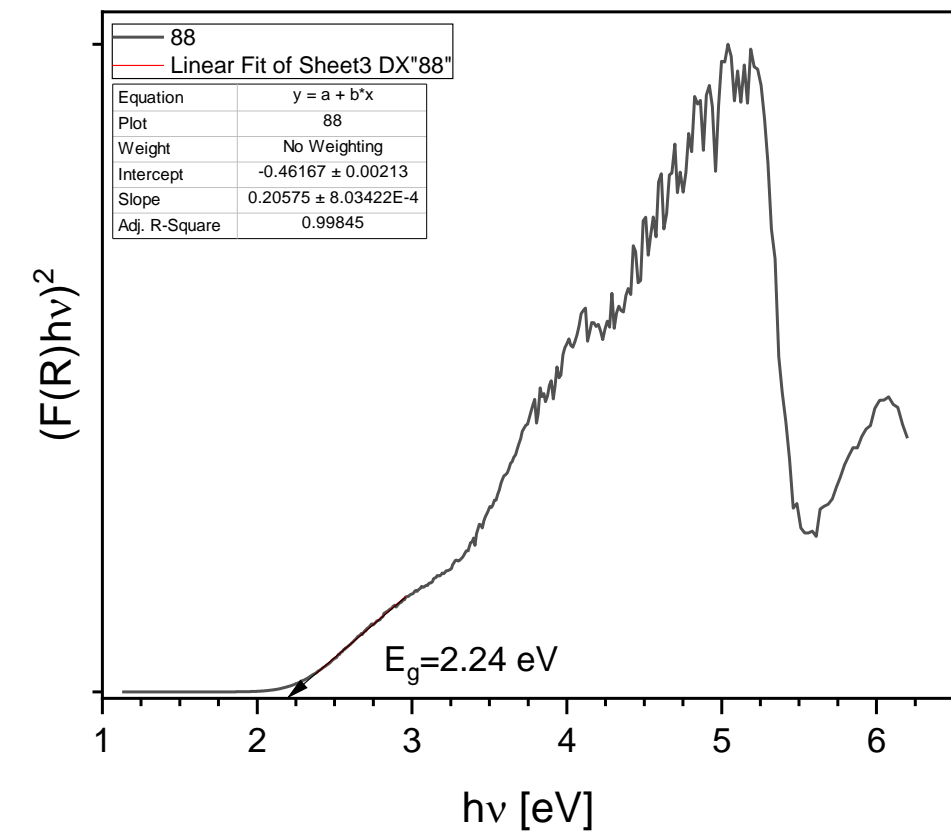
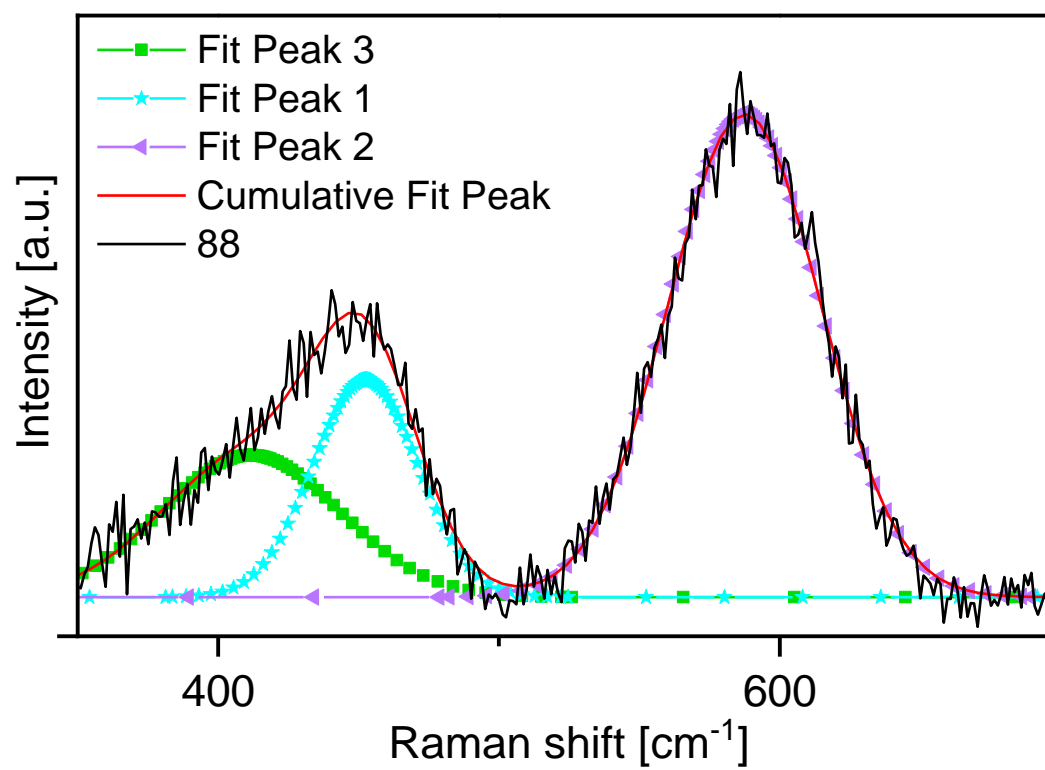
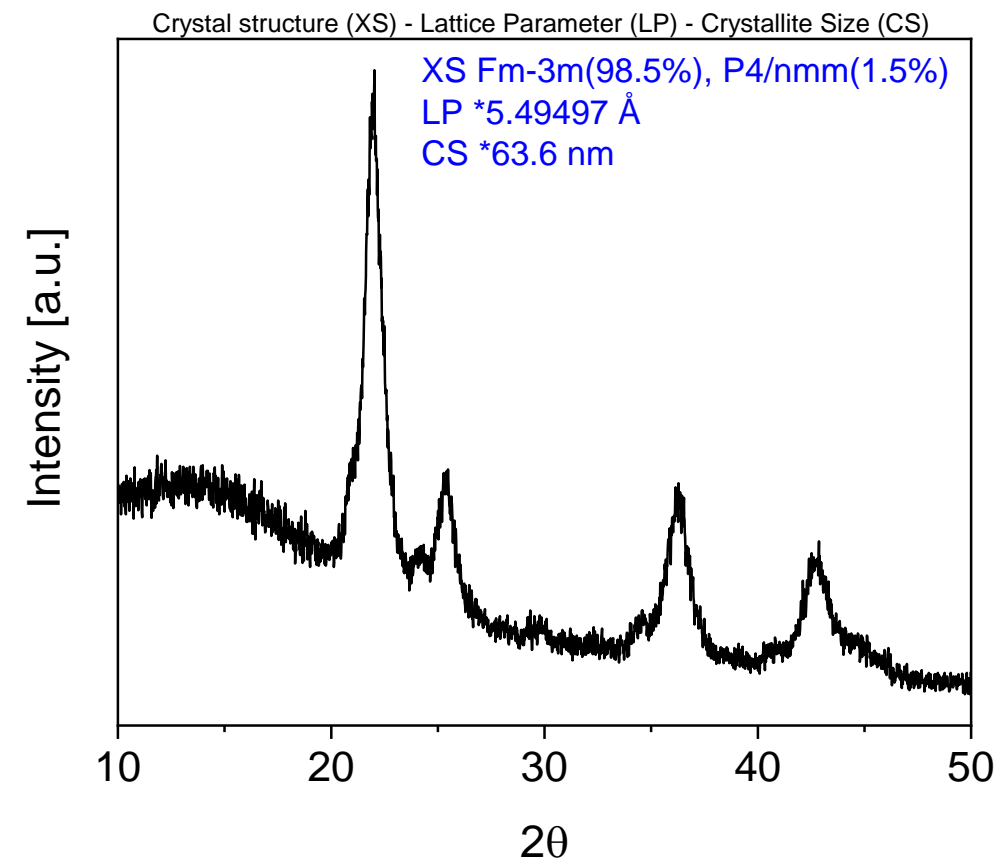
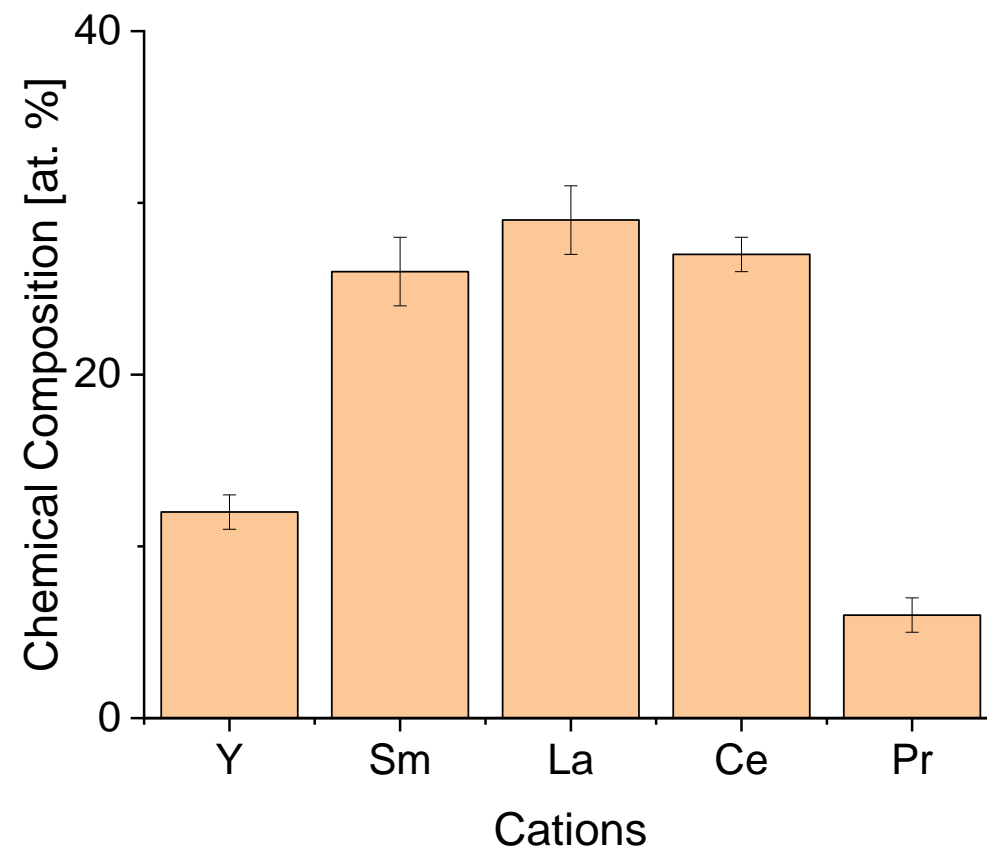
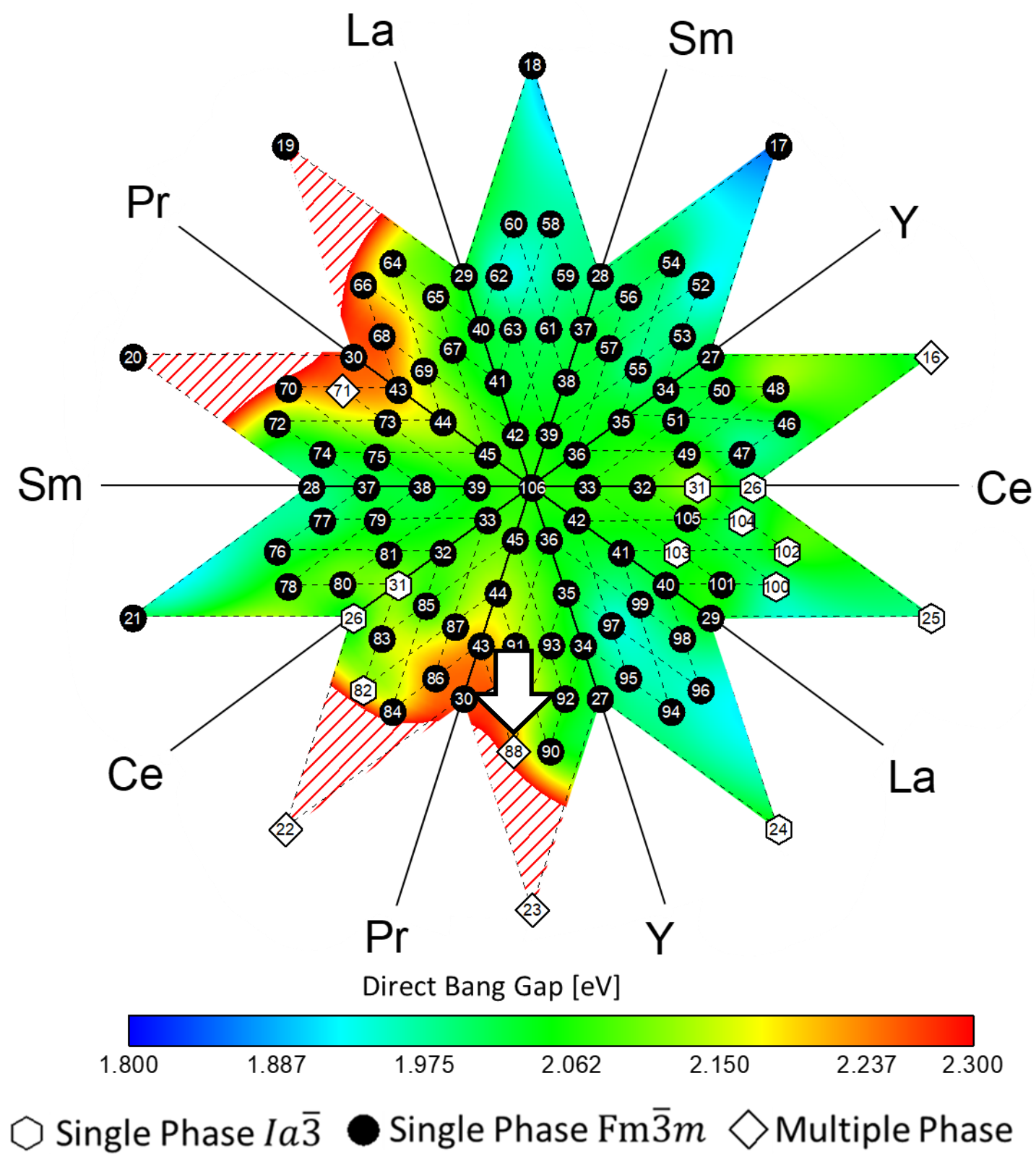


# Sample 87

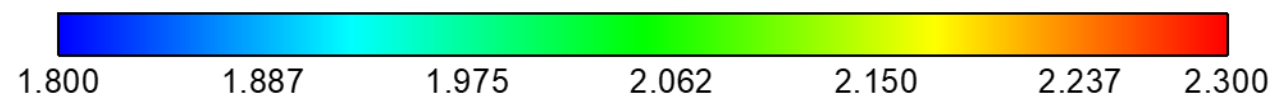
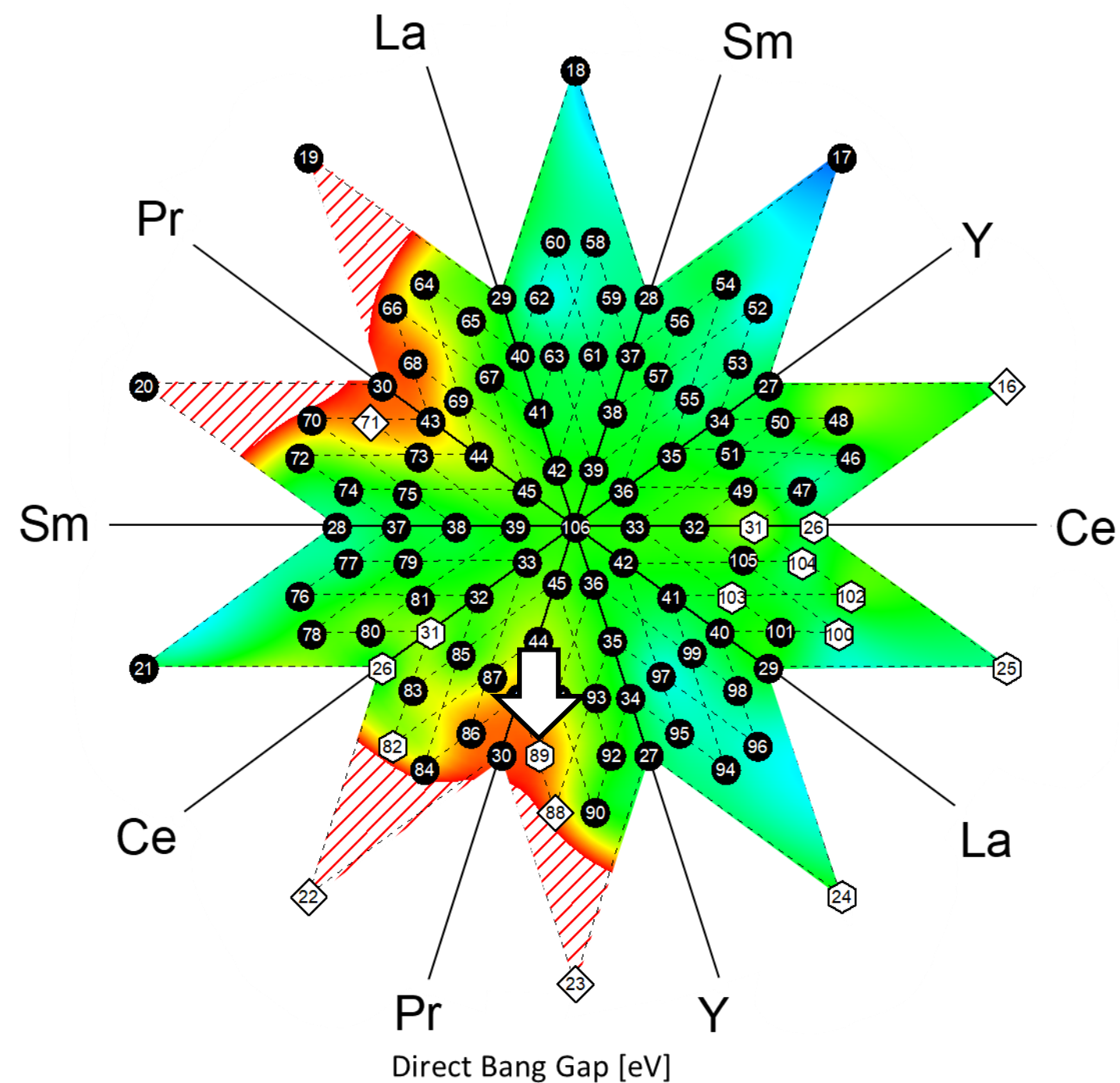




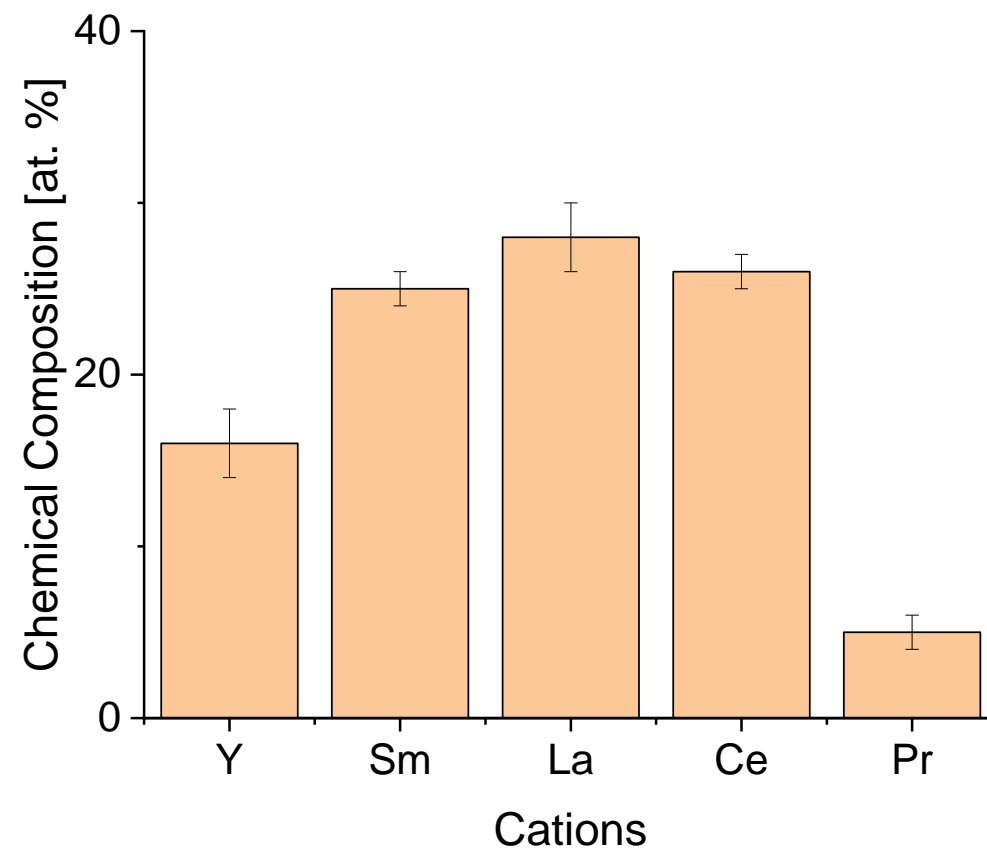
# Sample 88



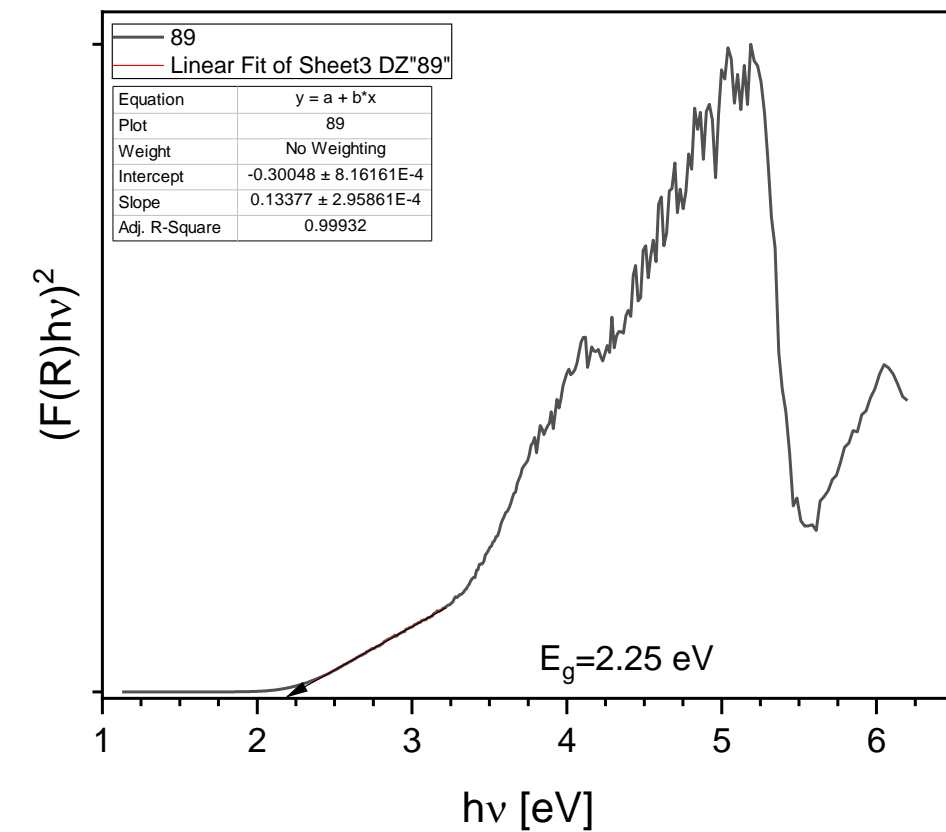
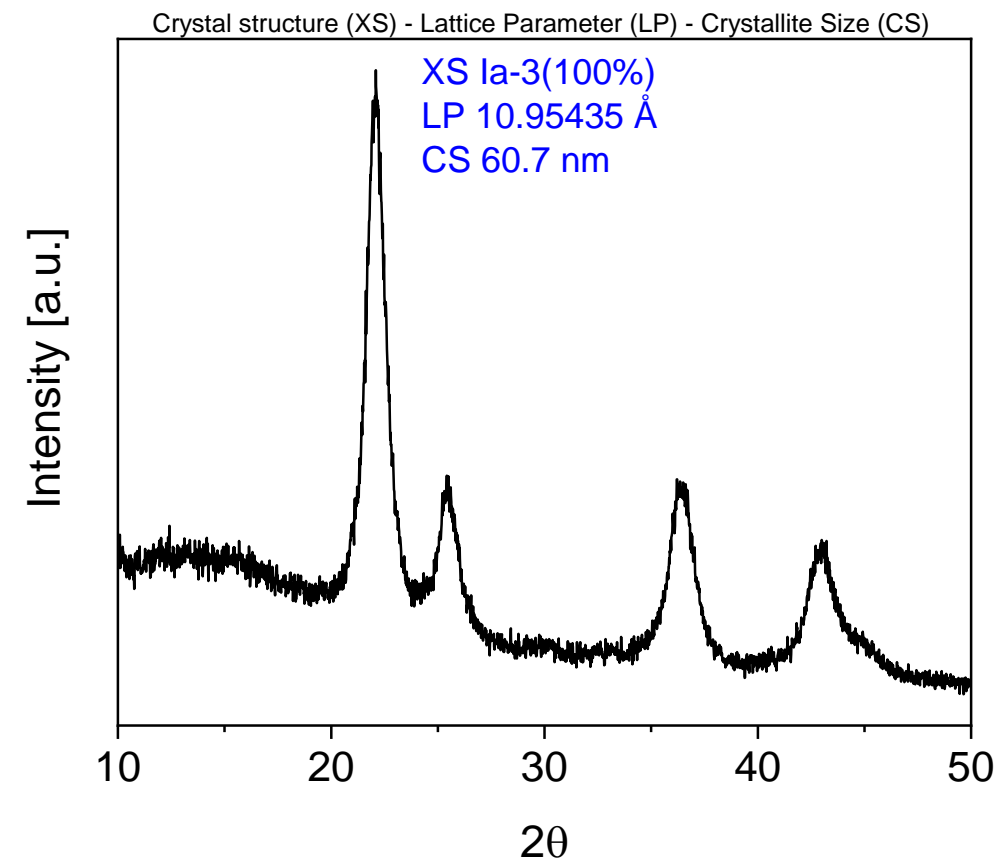
# Sample 89



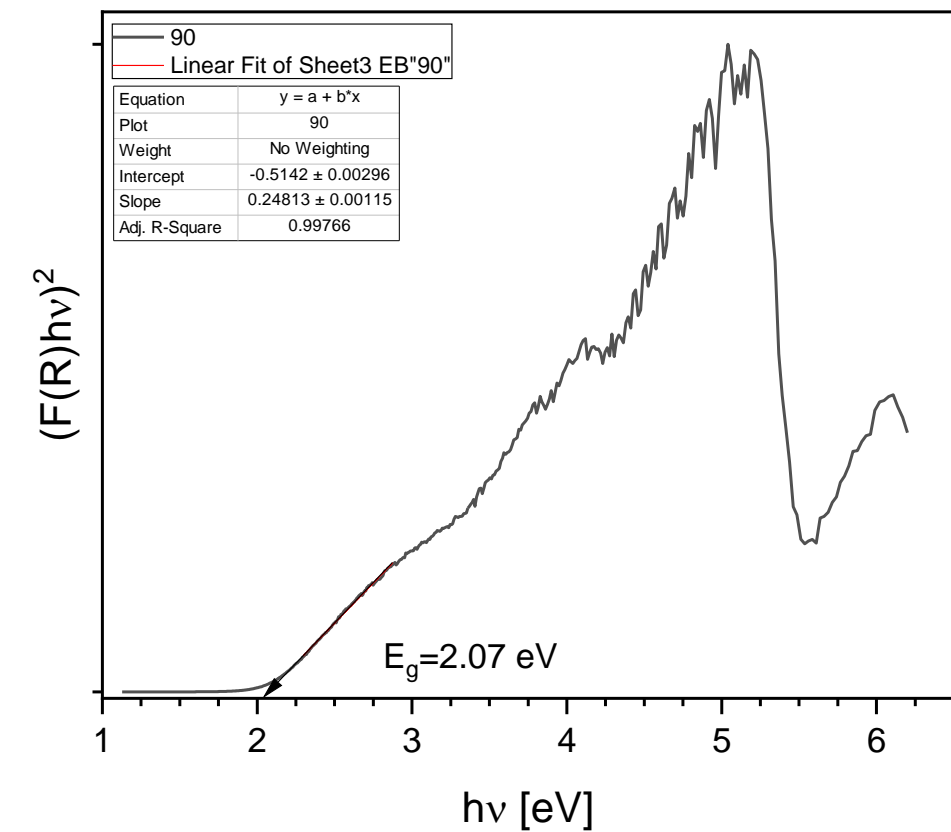
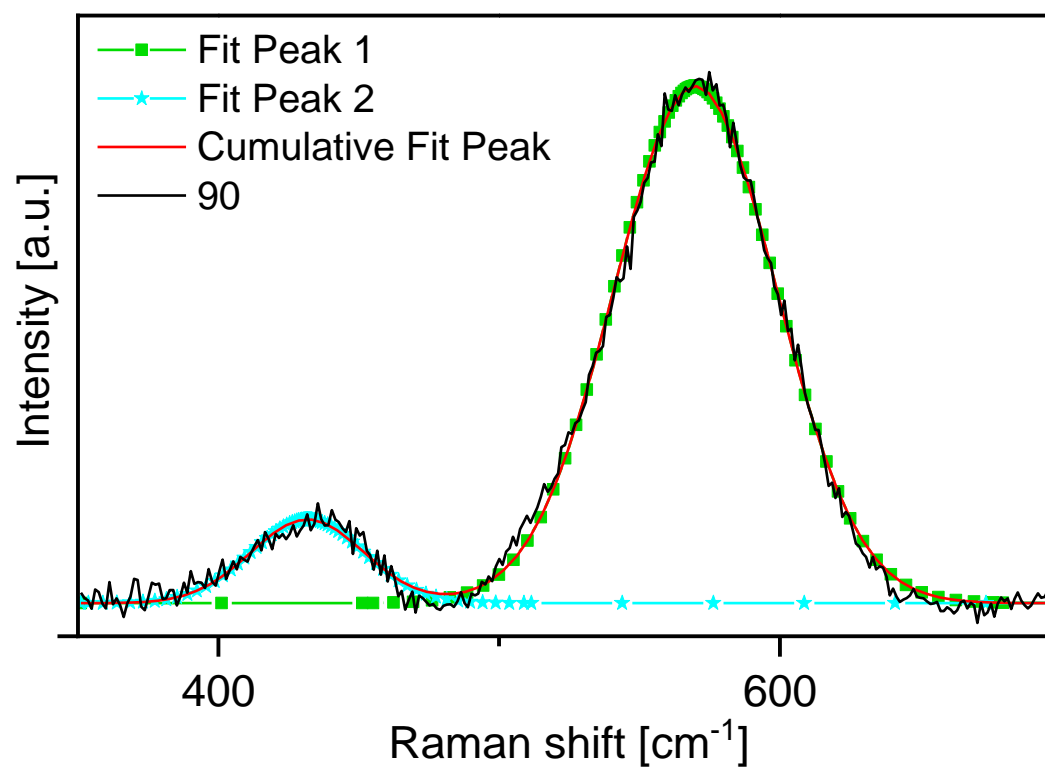
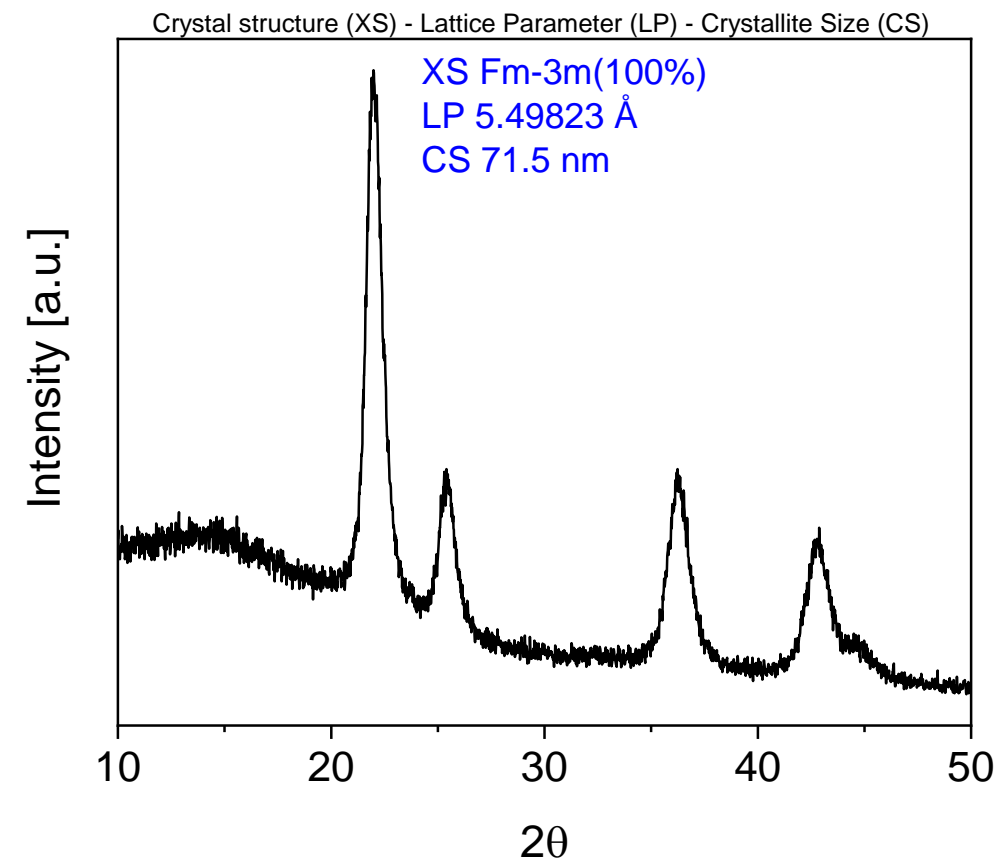
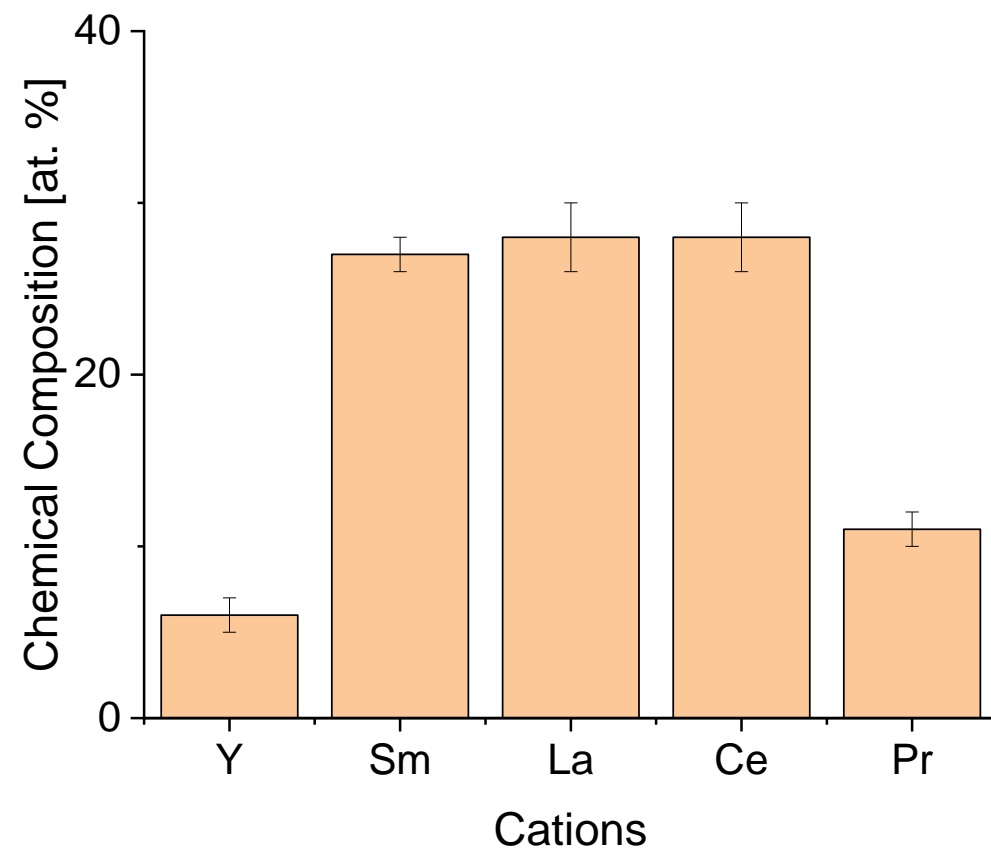
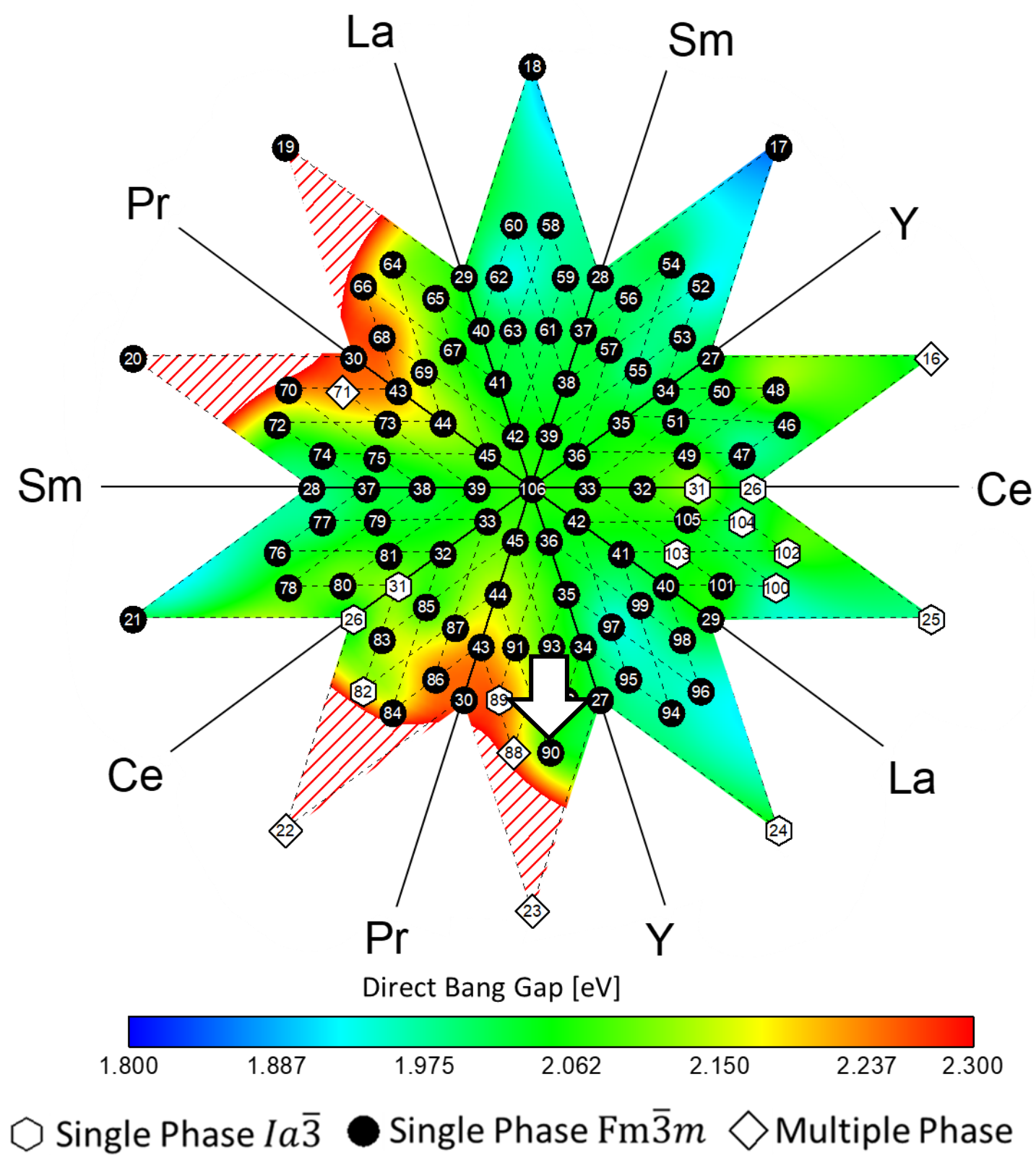
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



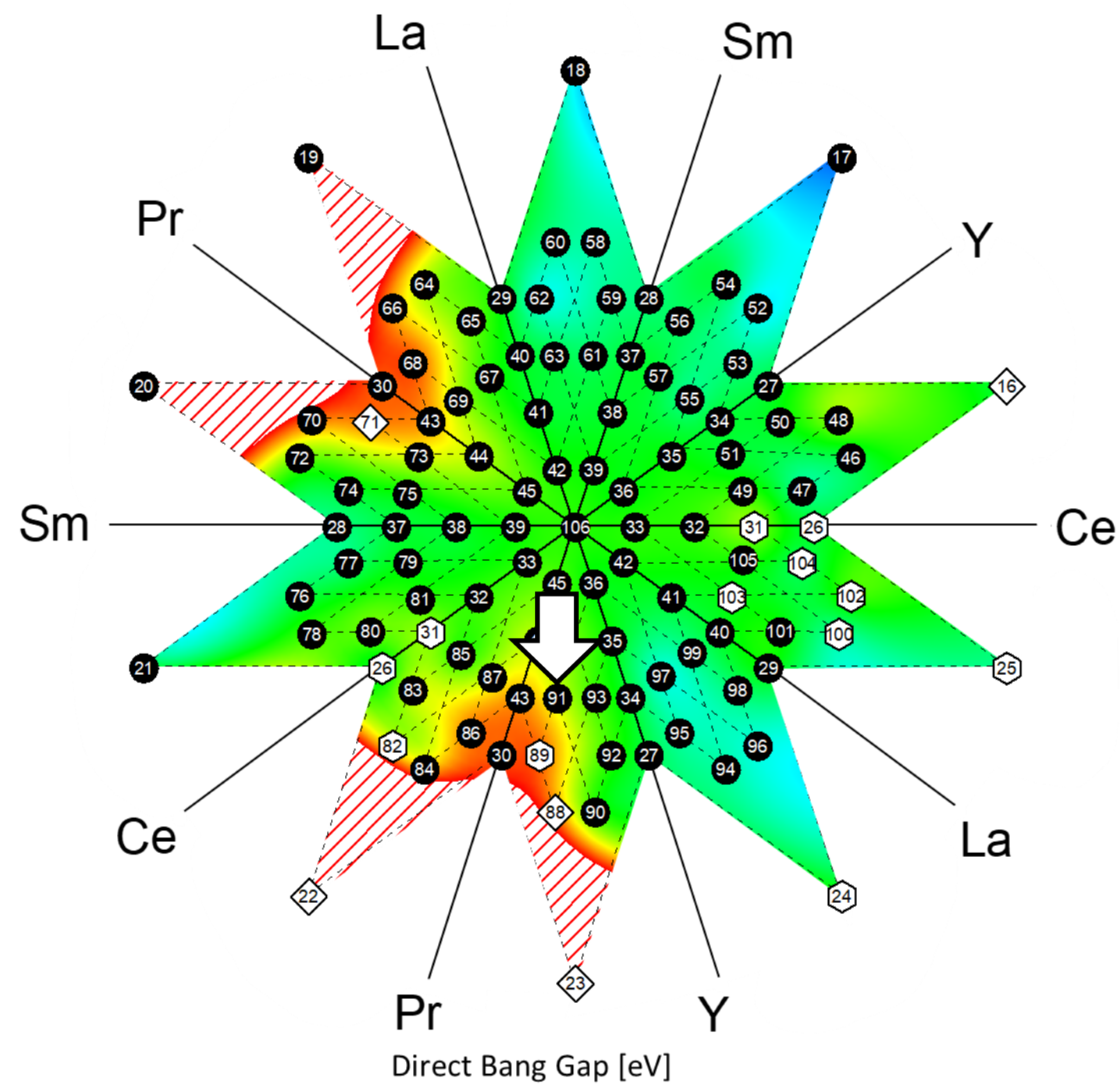
N.A.



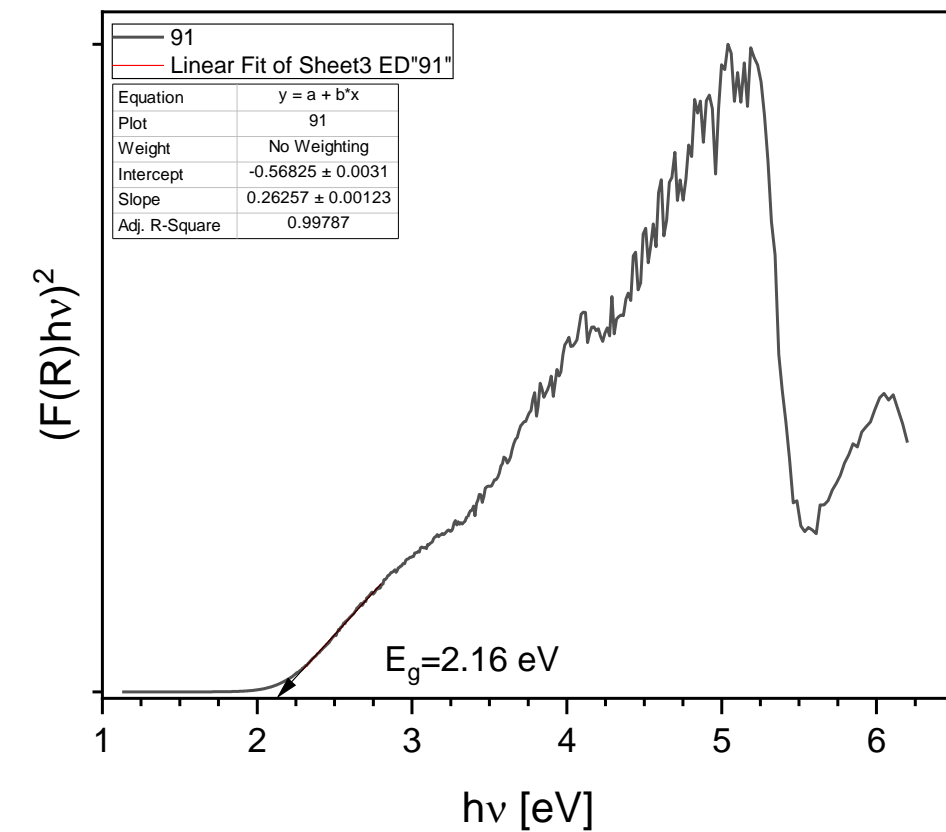
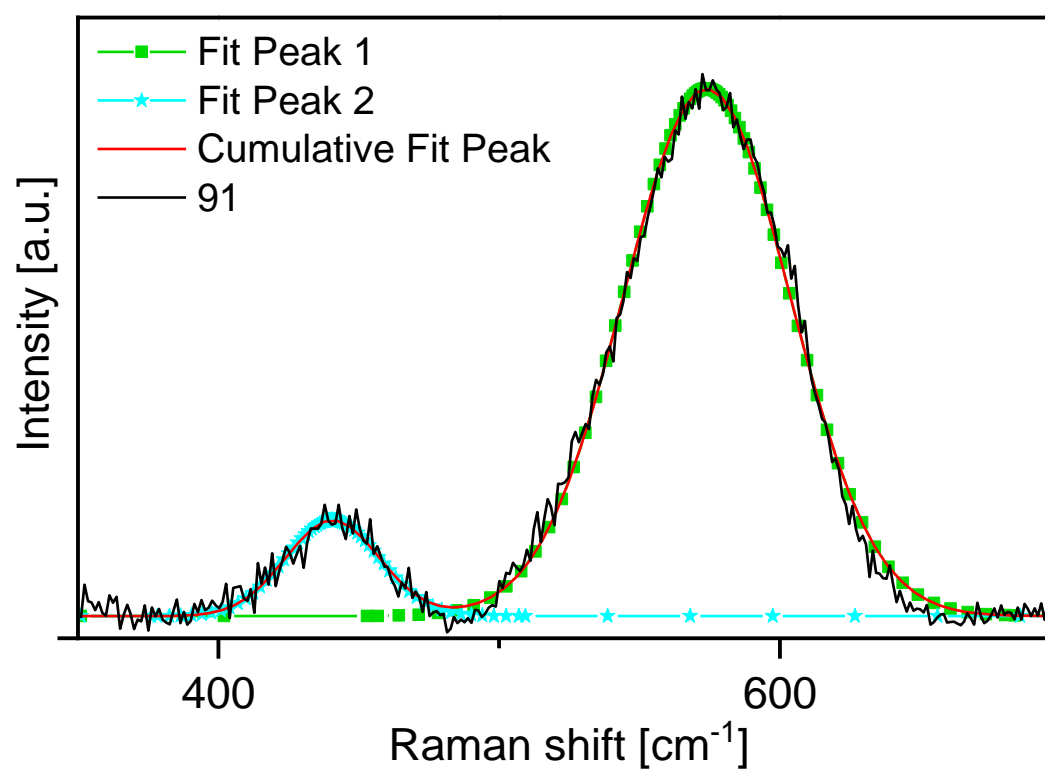
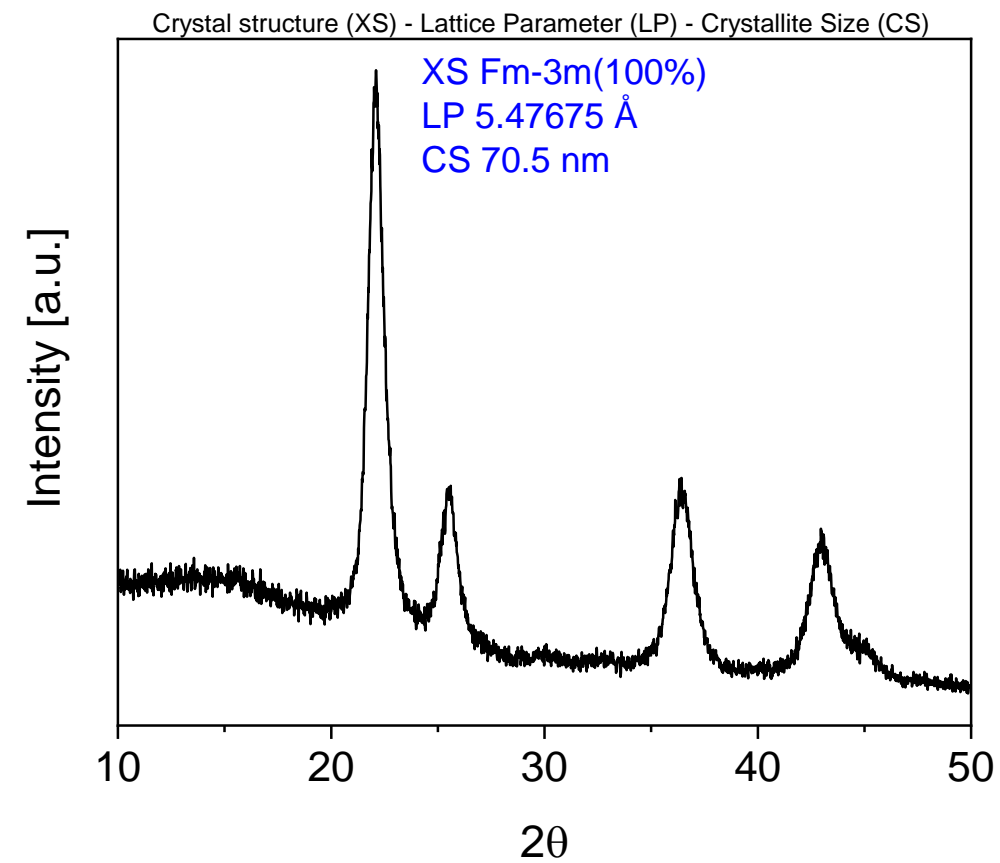
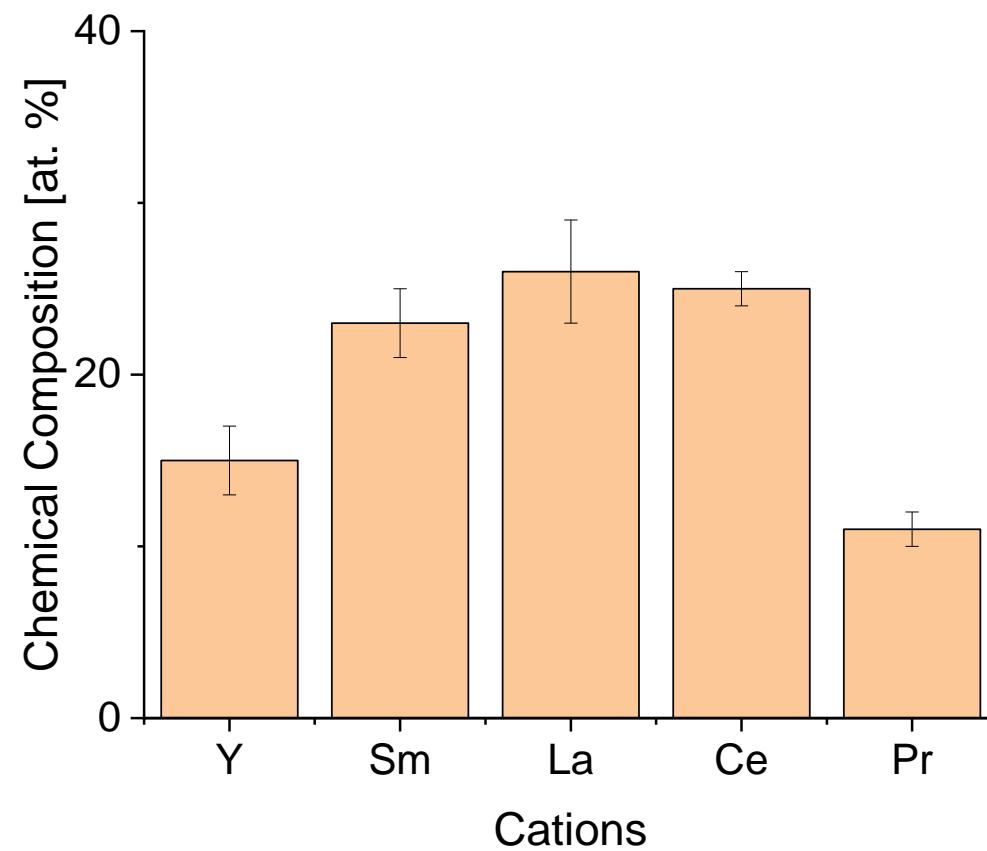
# Sample 90



# Sample 91

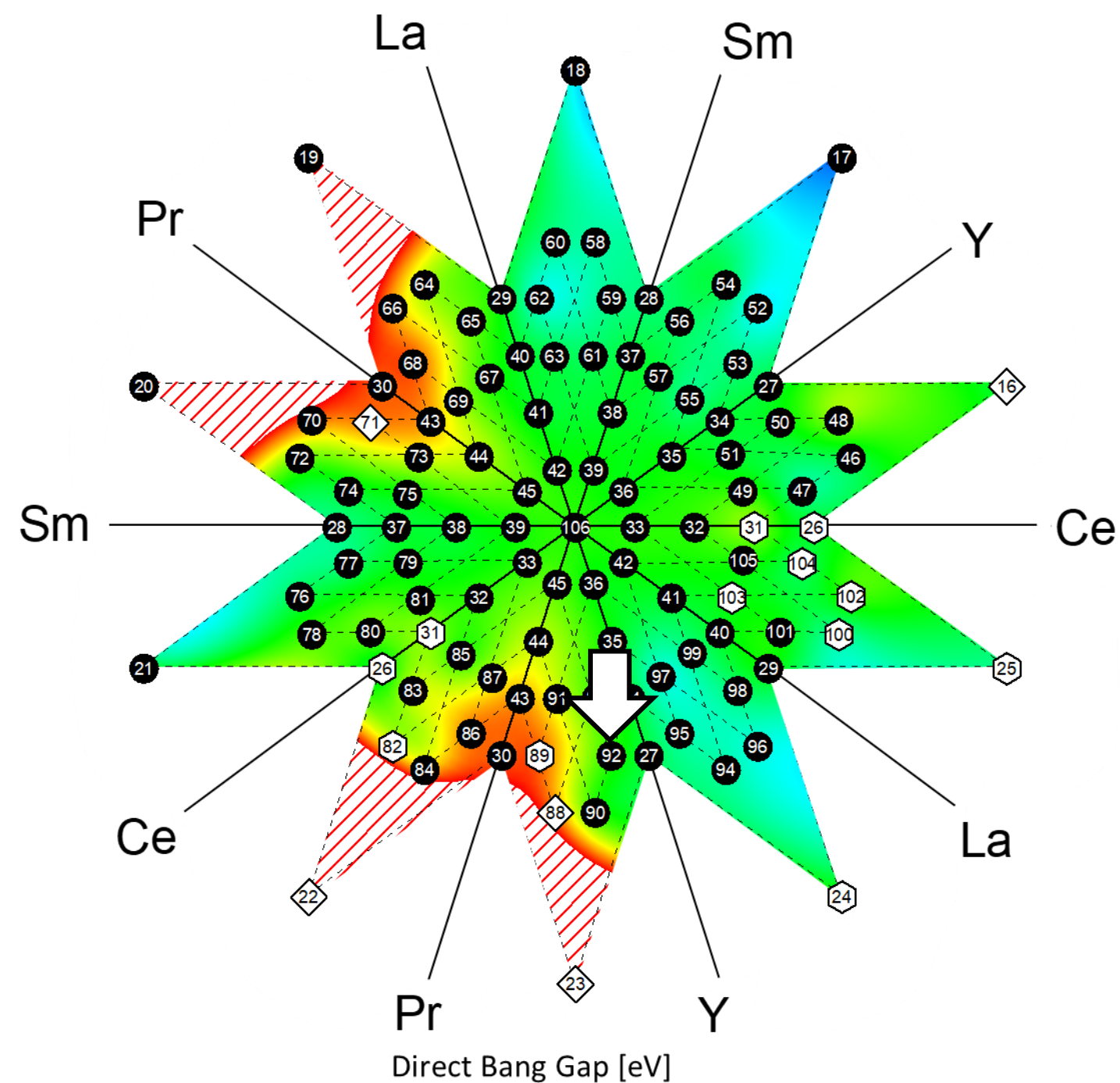


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

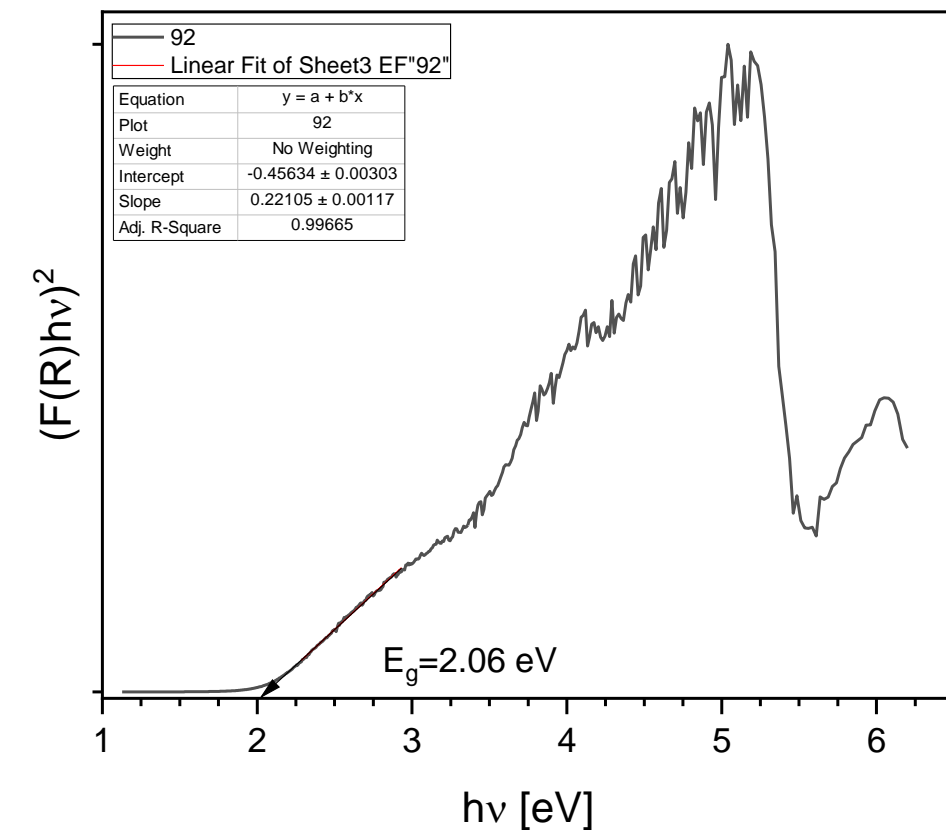
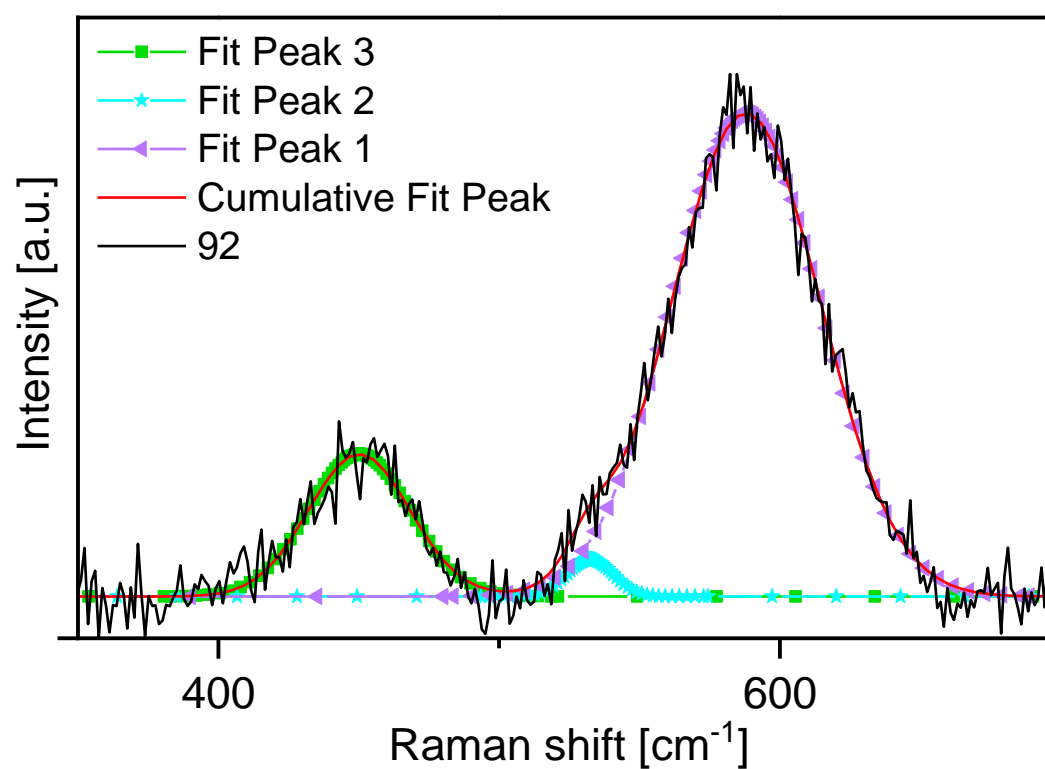
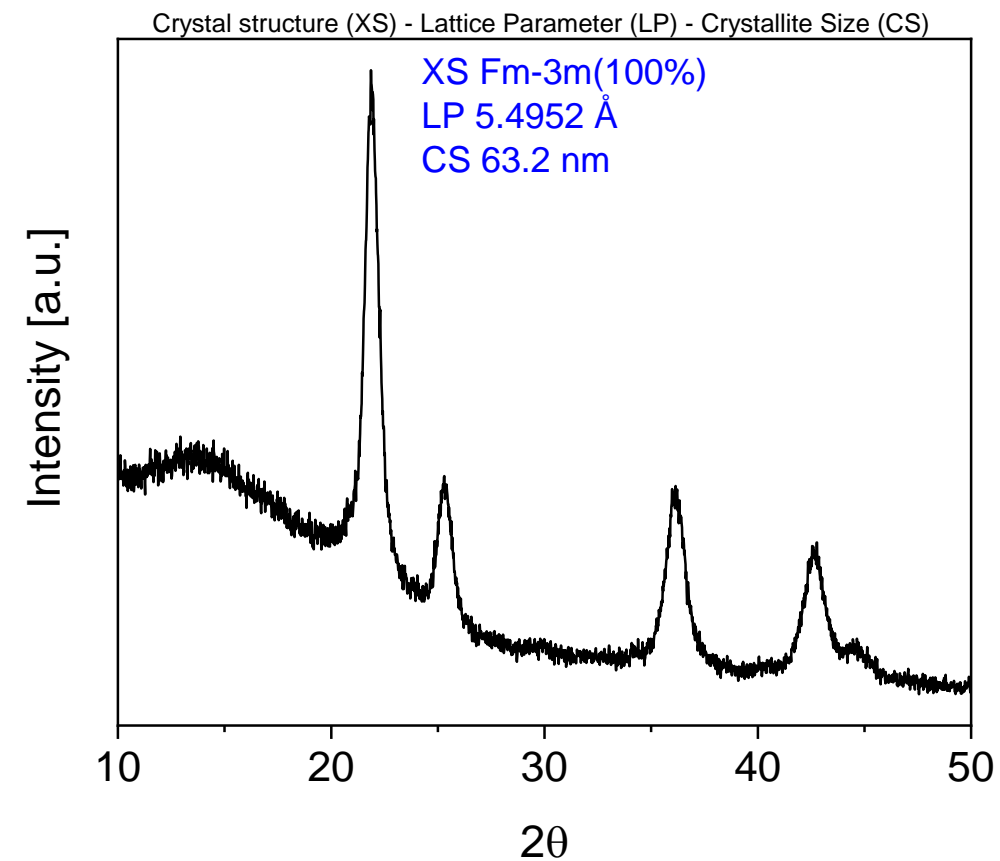
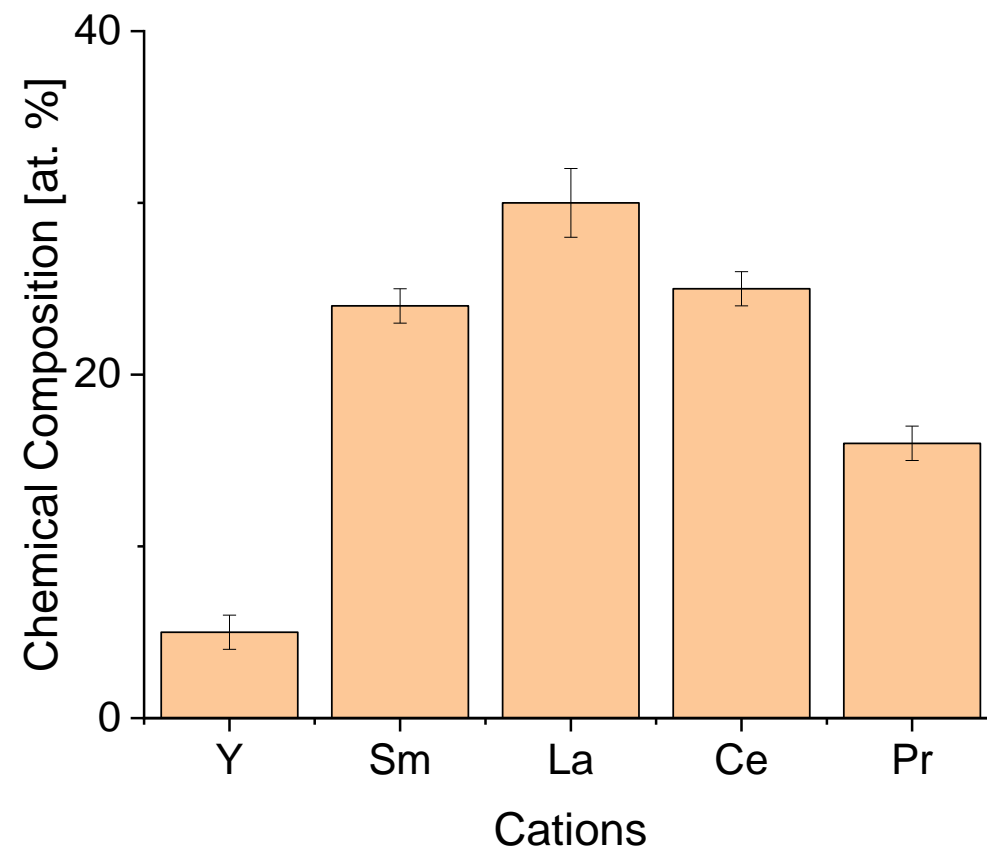




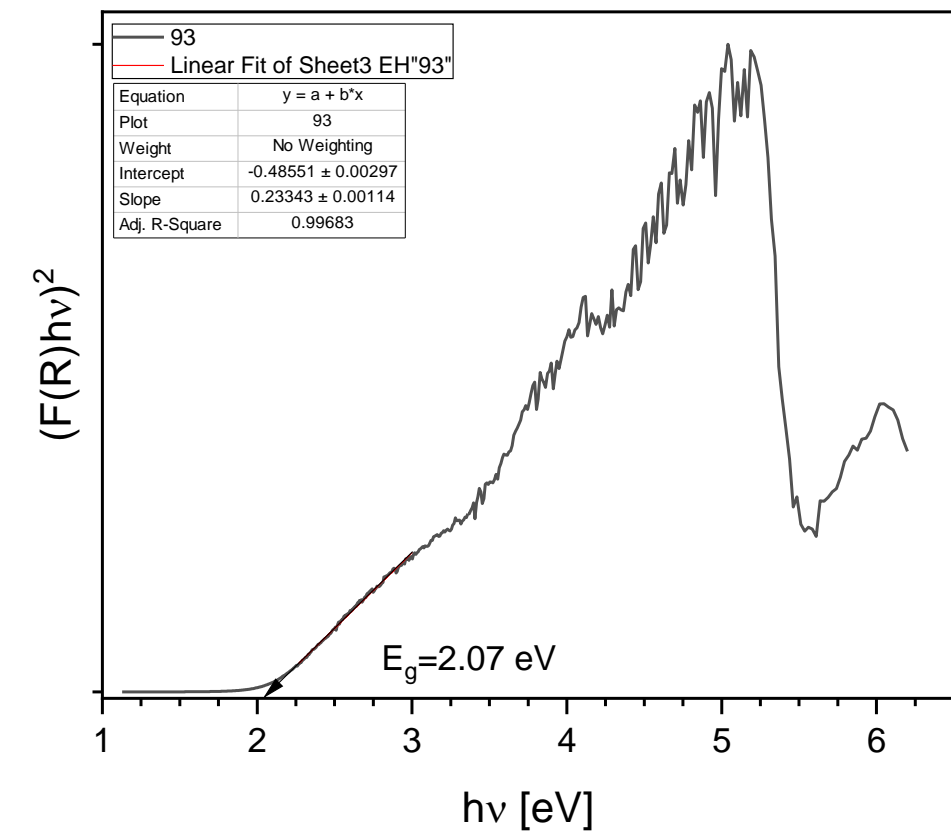
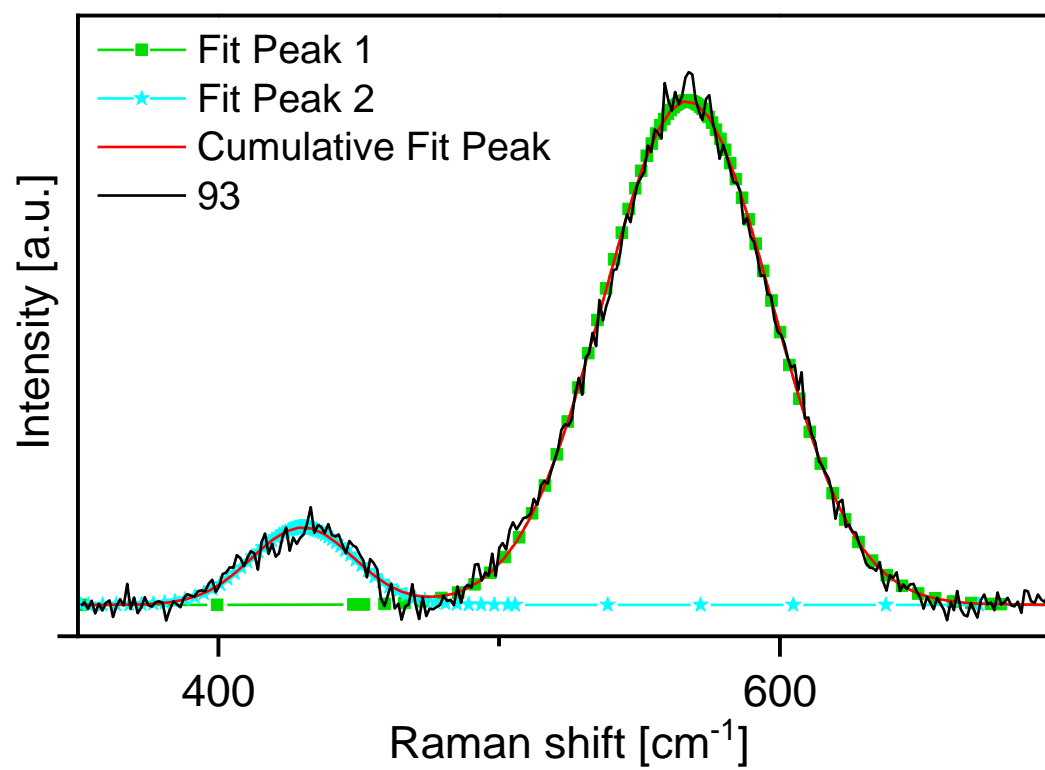
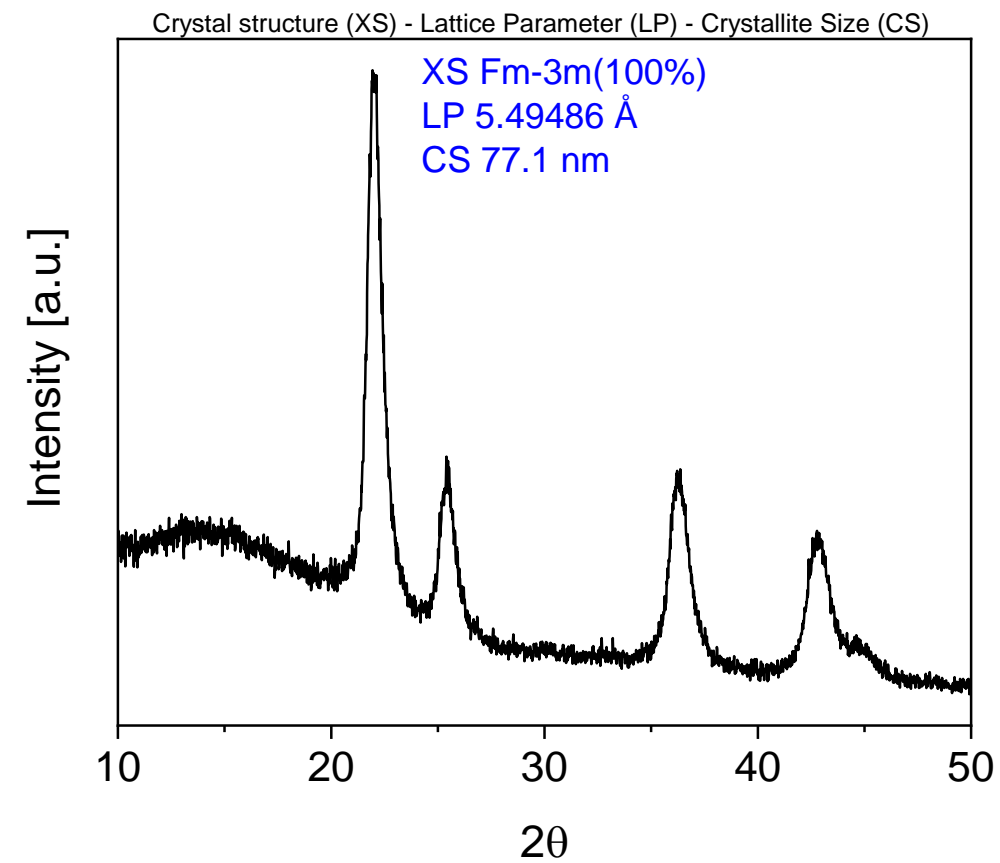
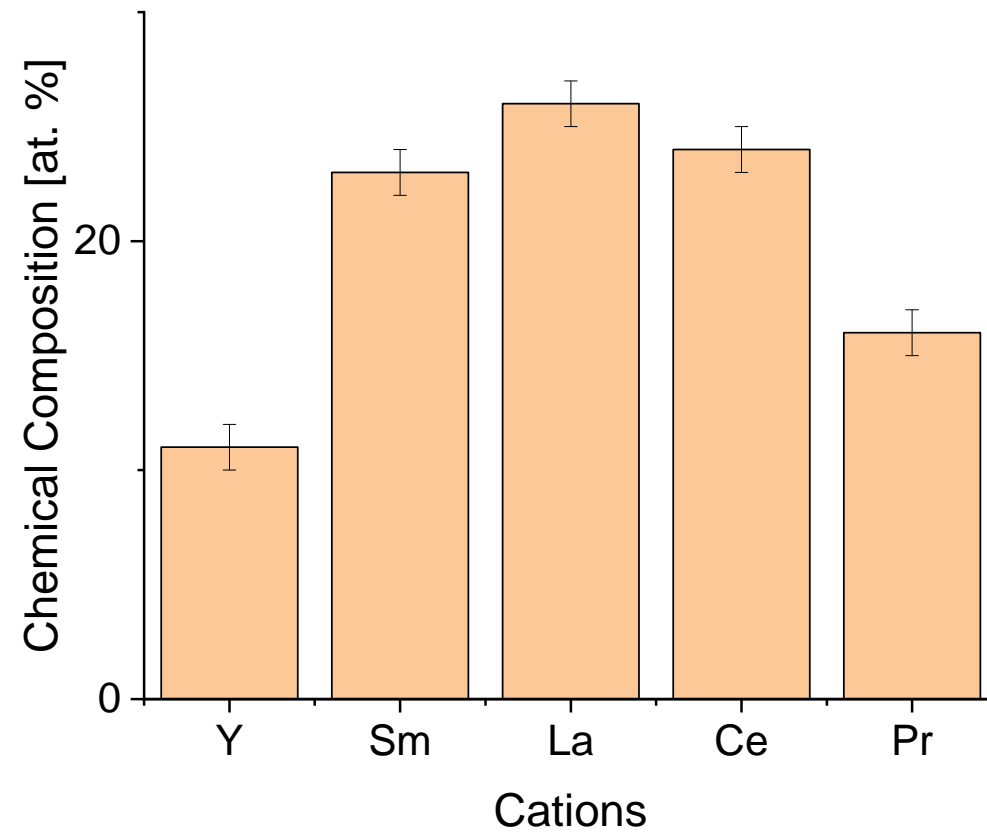
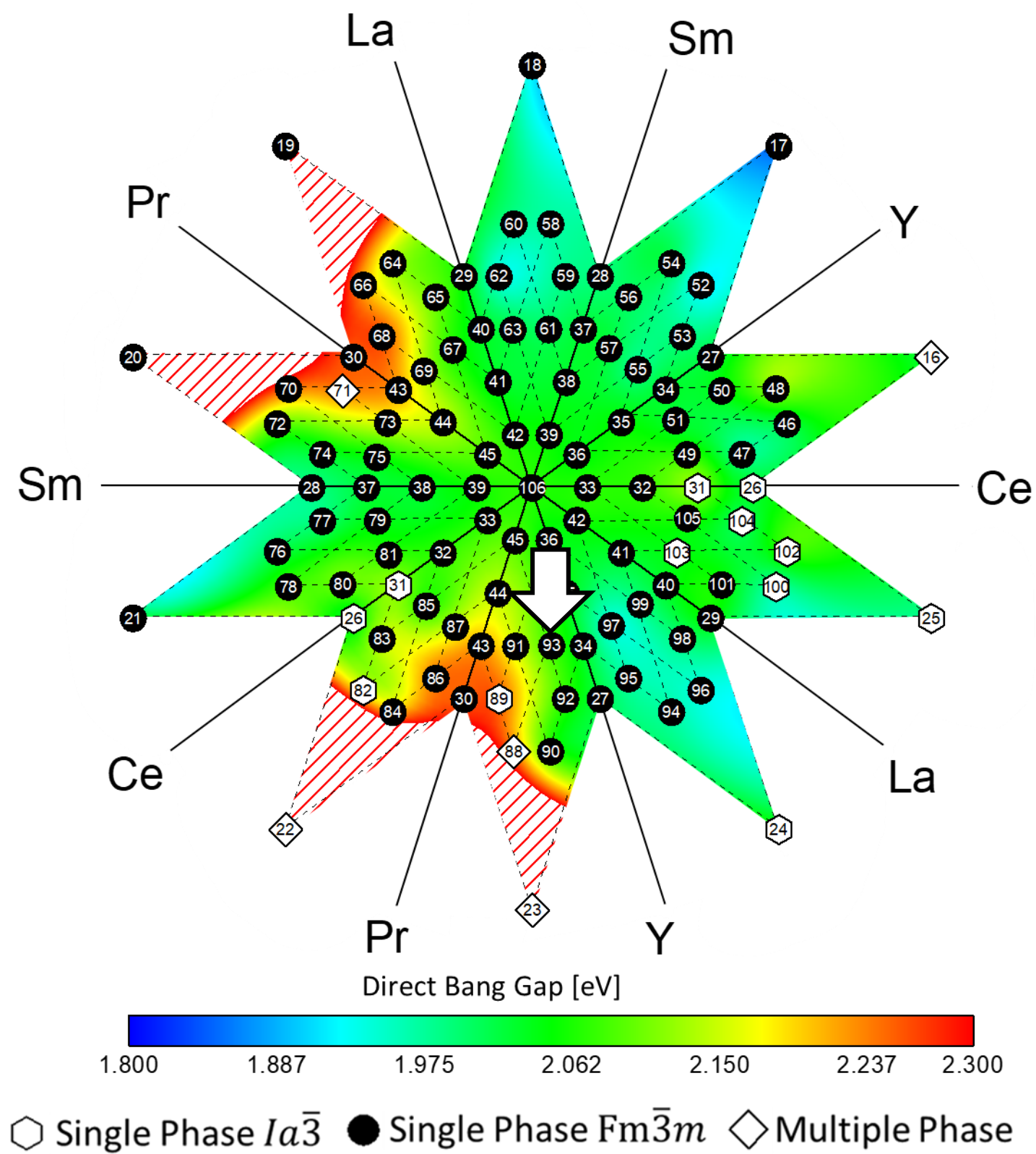
# Sample 92



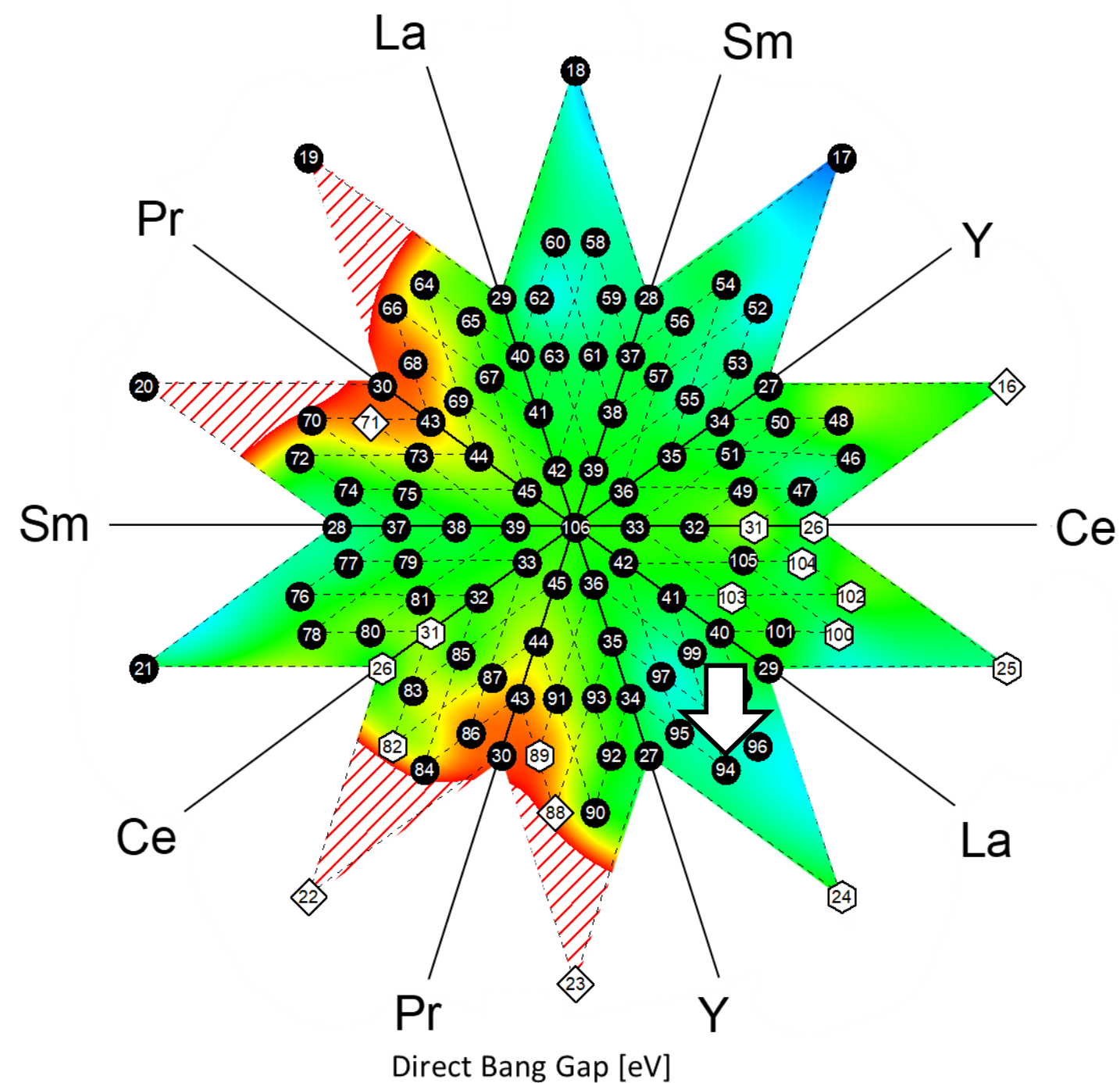
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



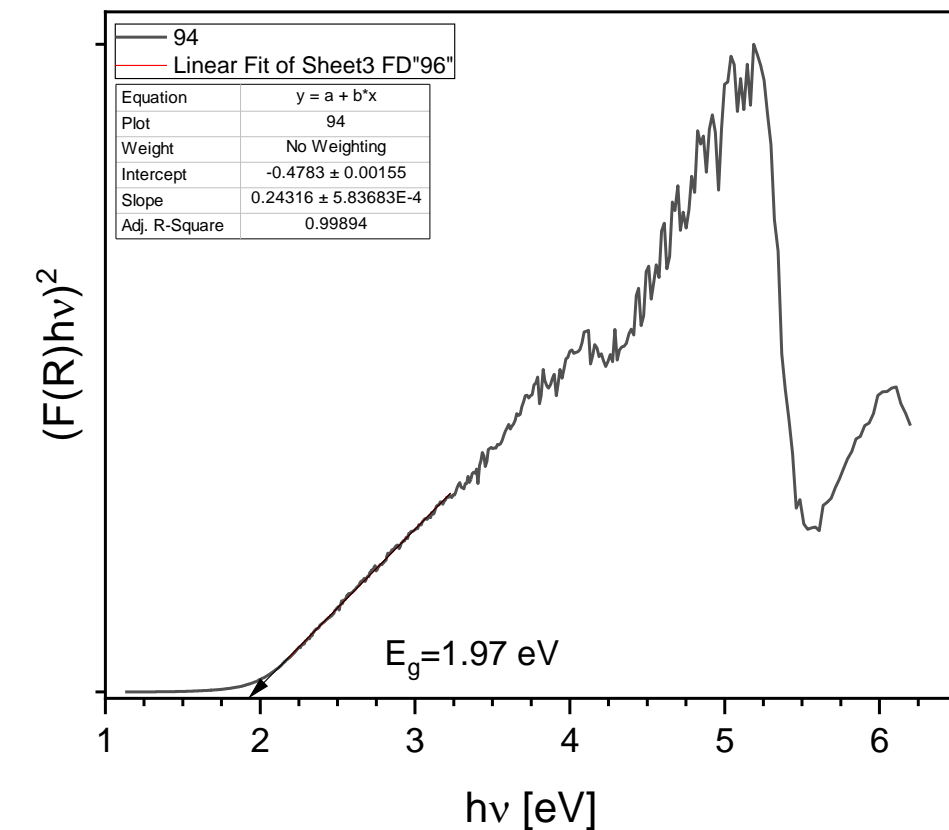
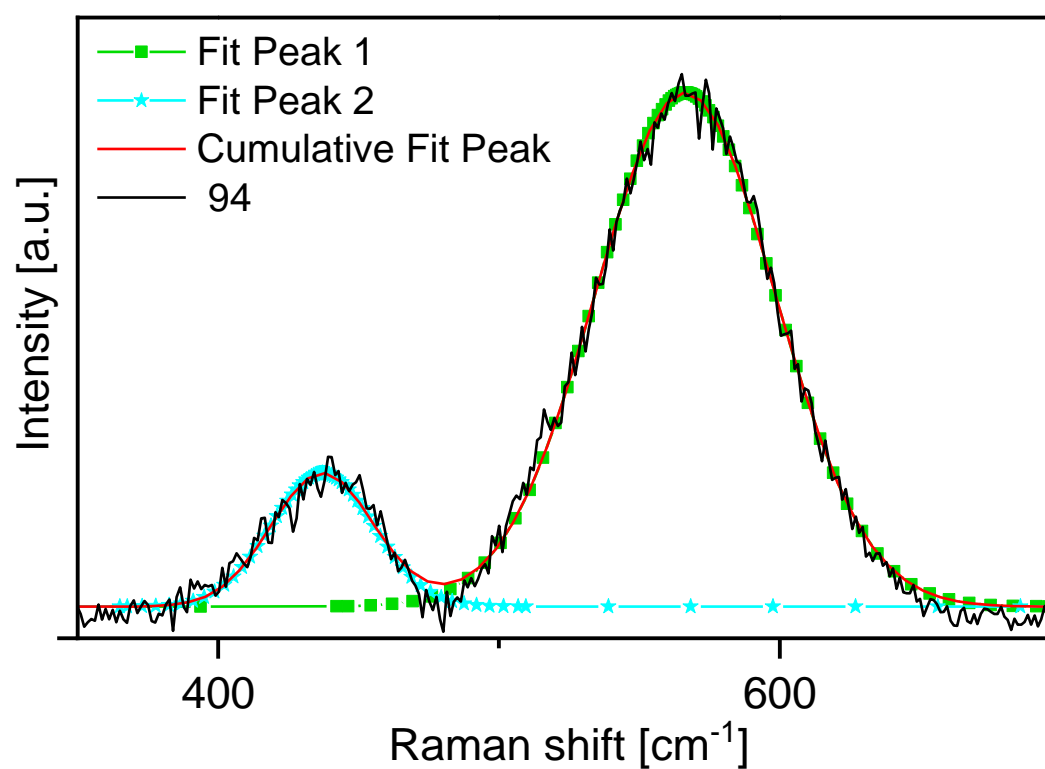
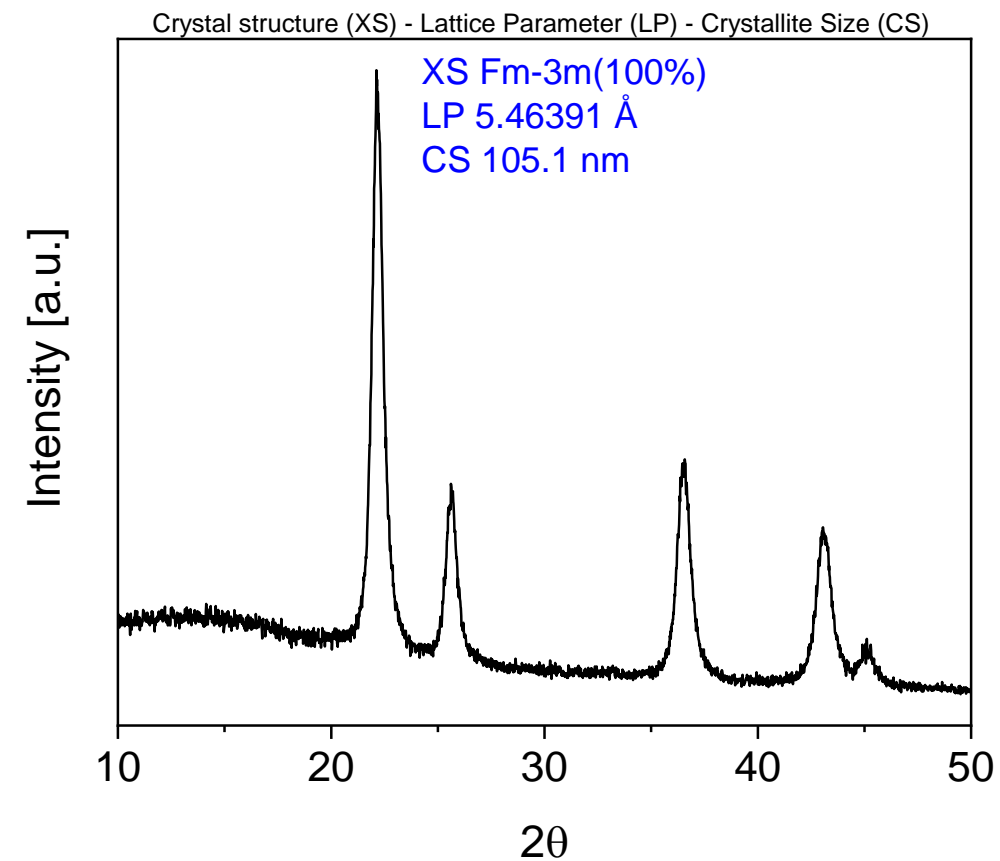
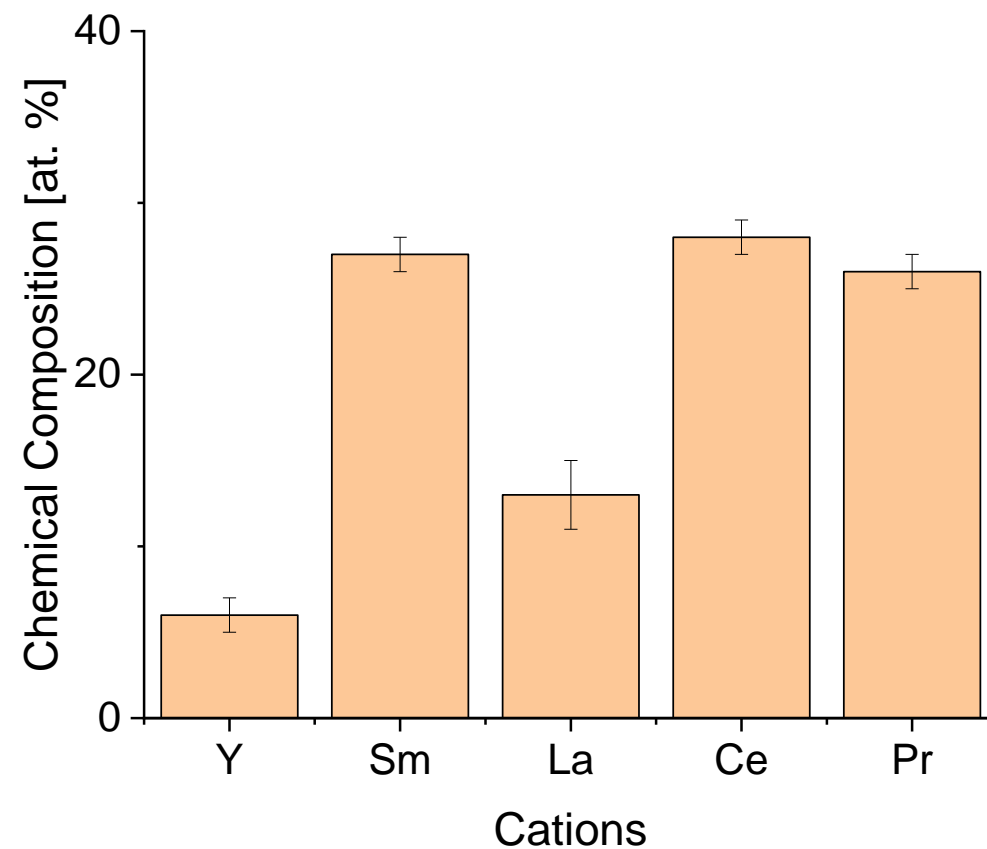
# Sample 93



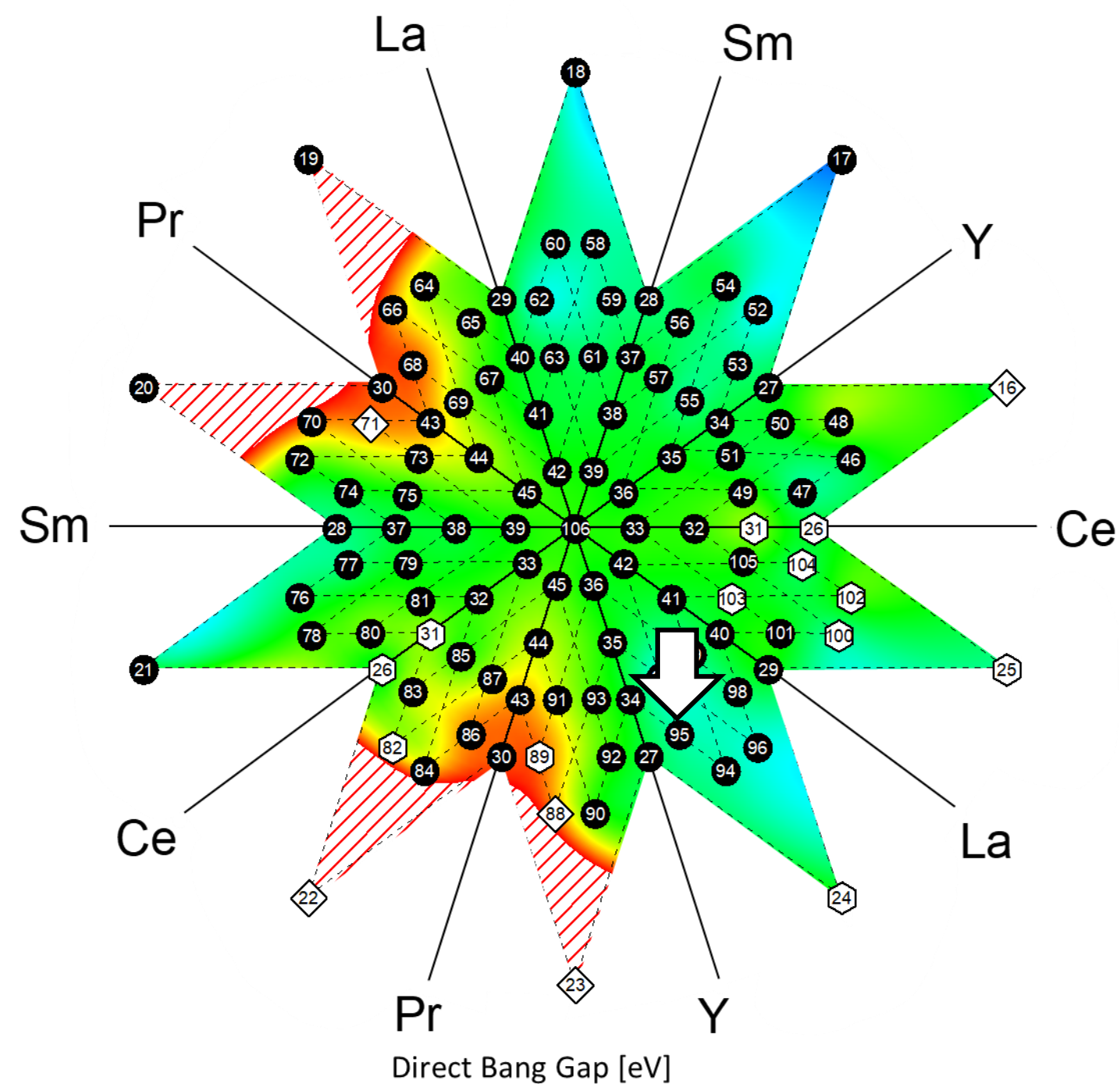
# Sample 94



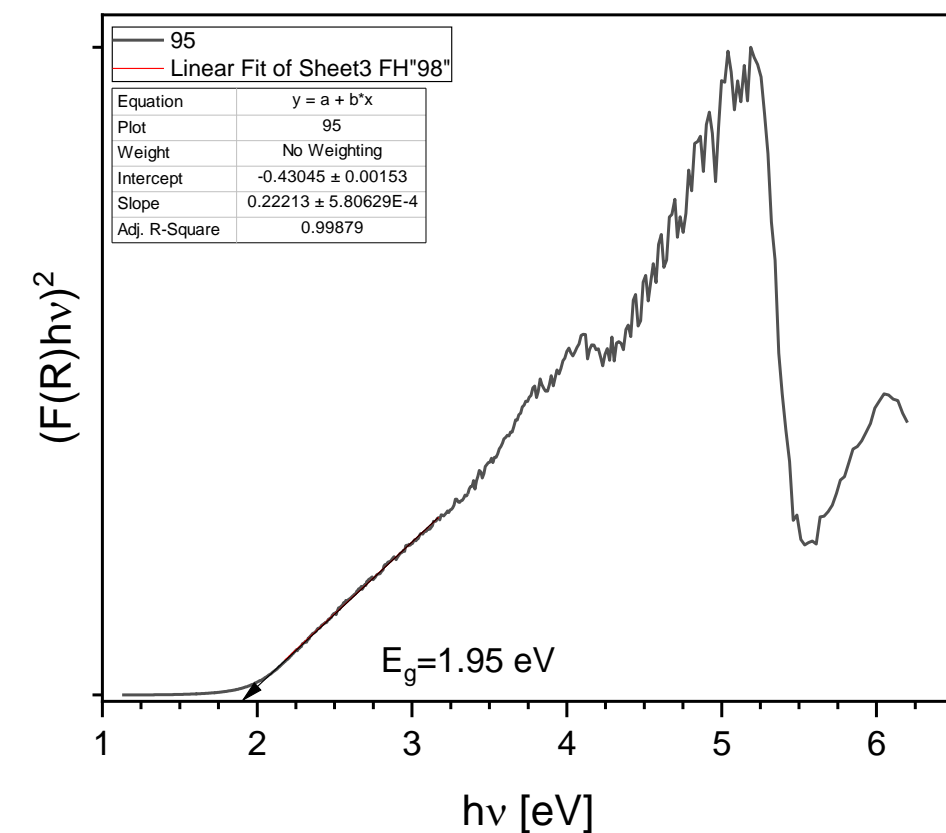
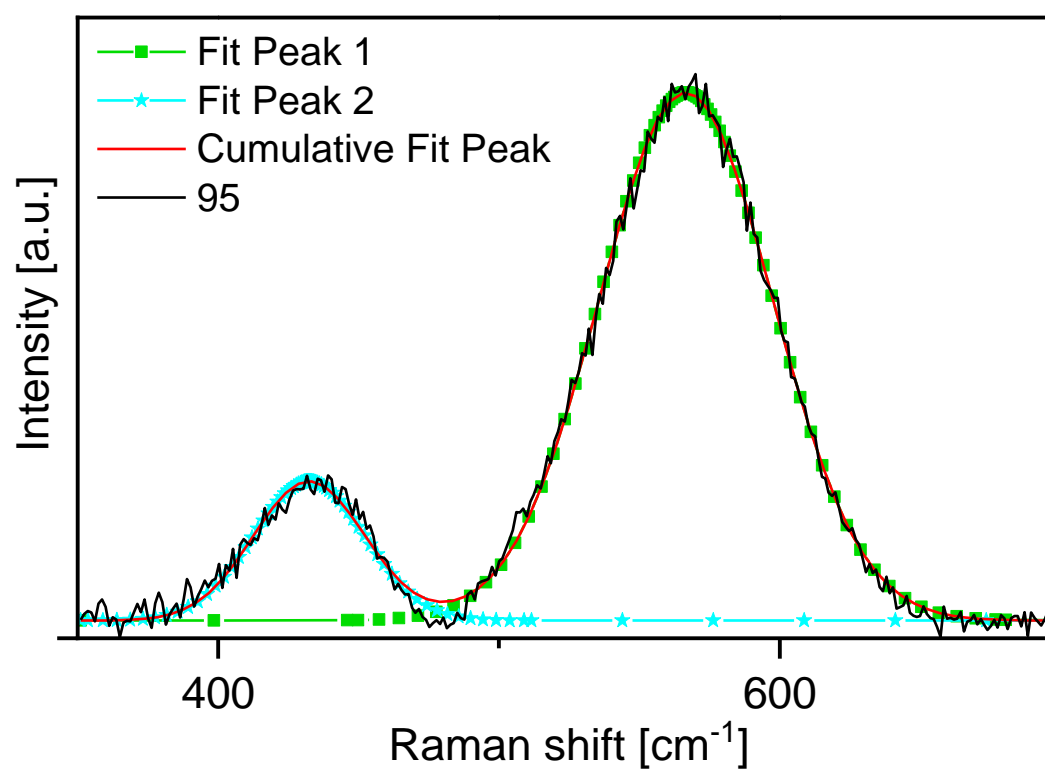
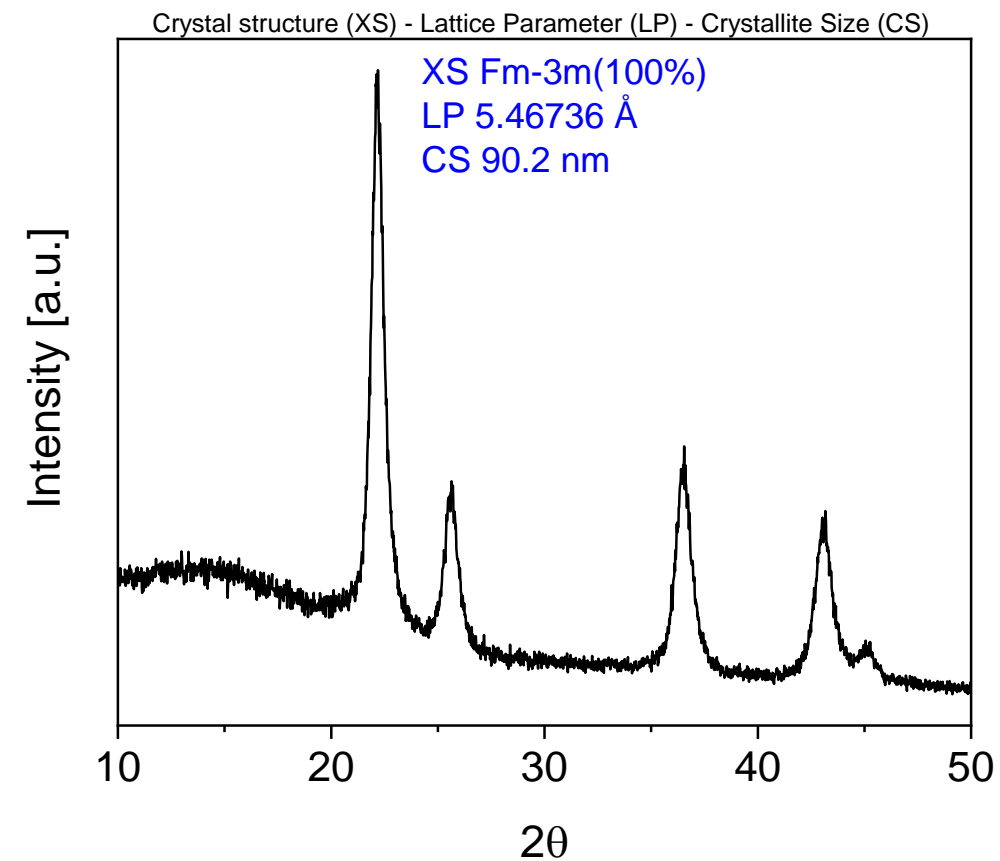
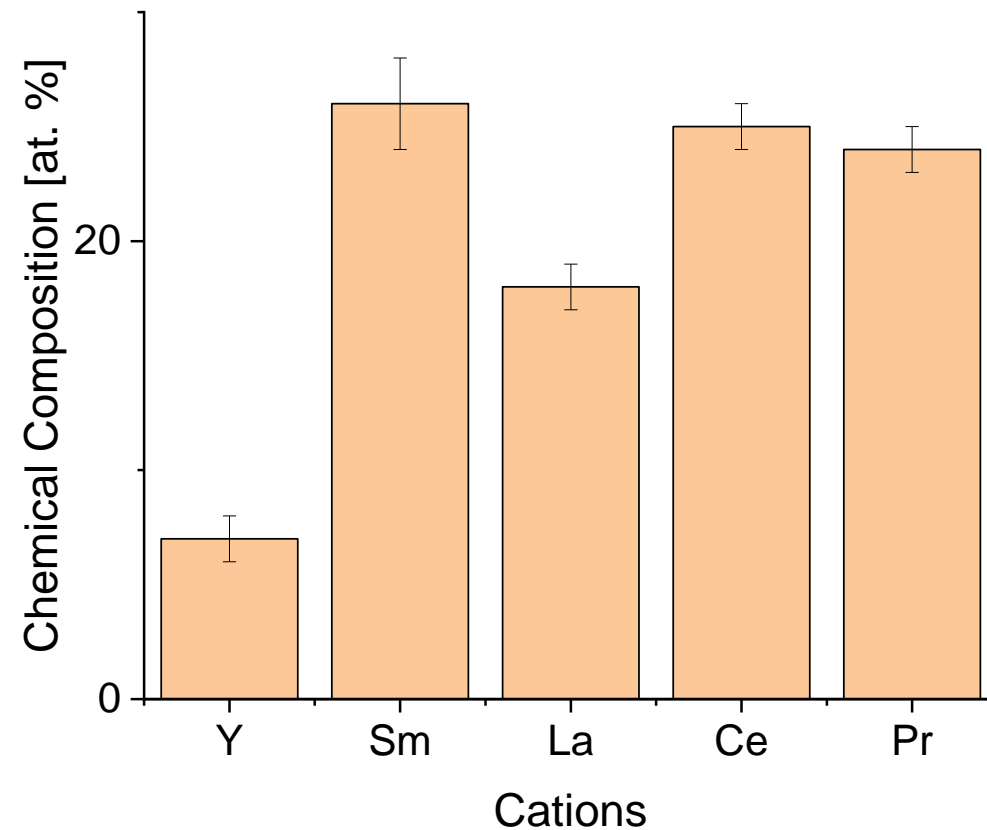
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



# Sample 95

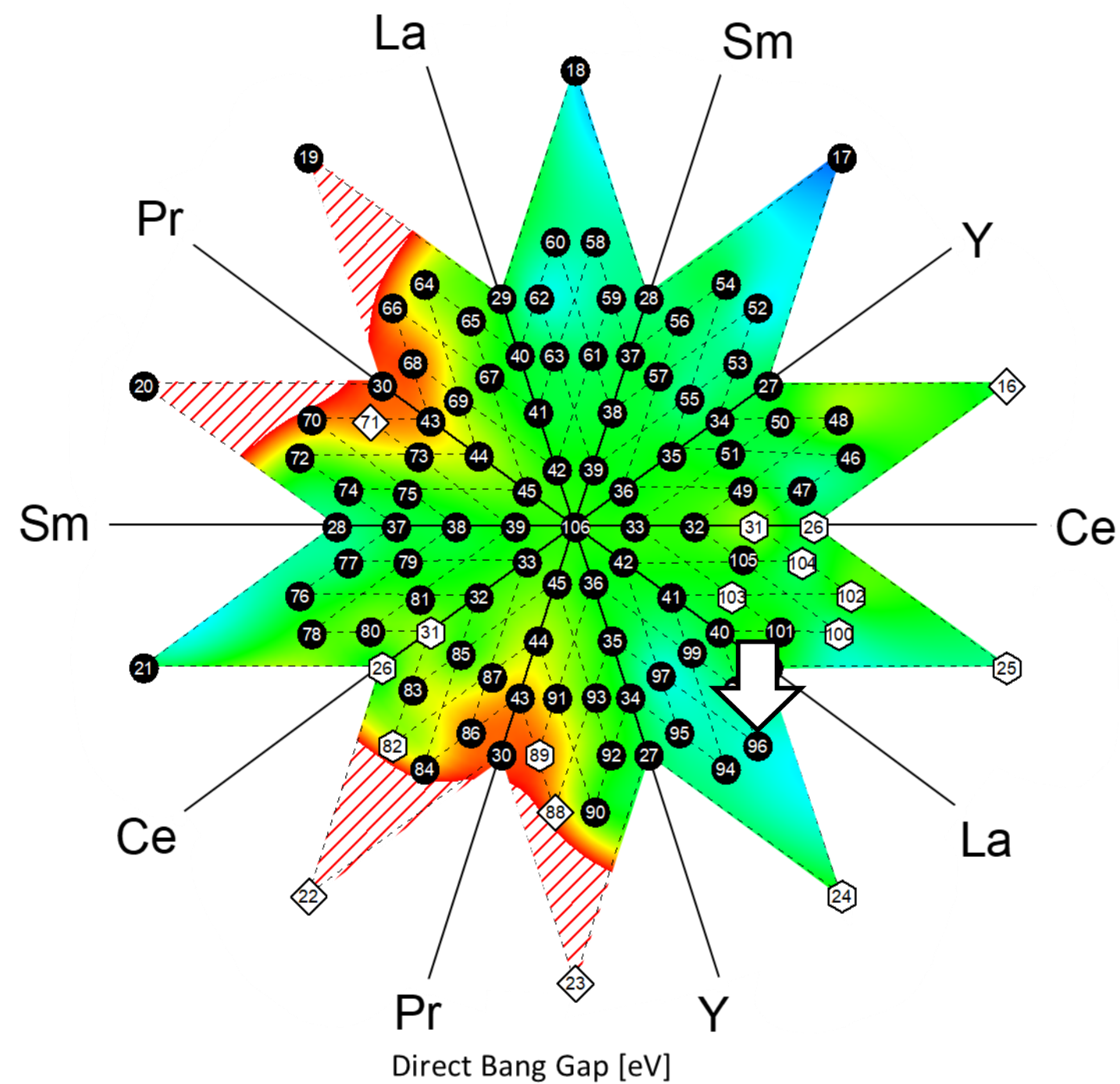


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

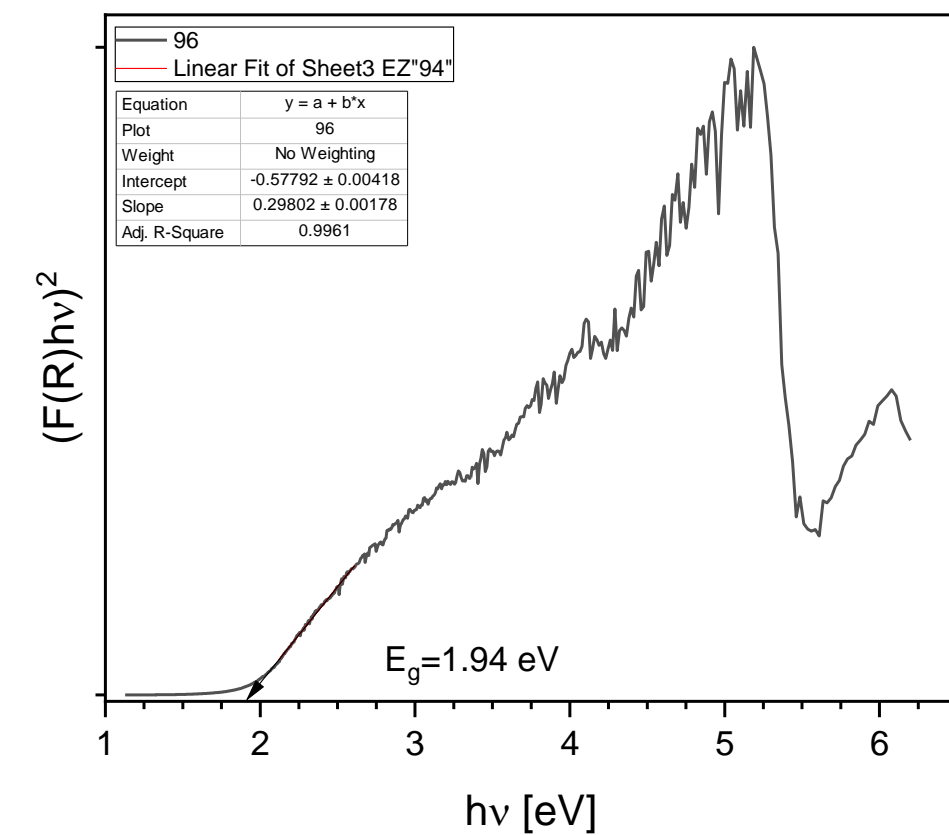
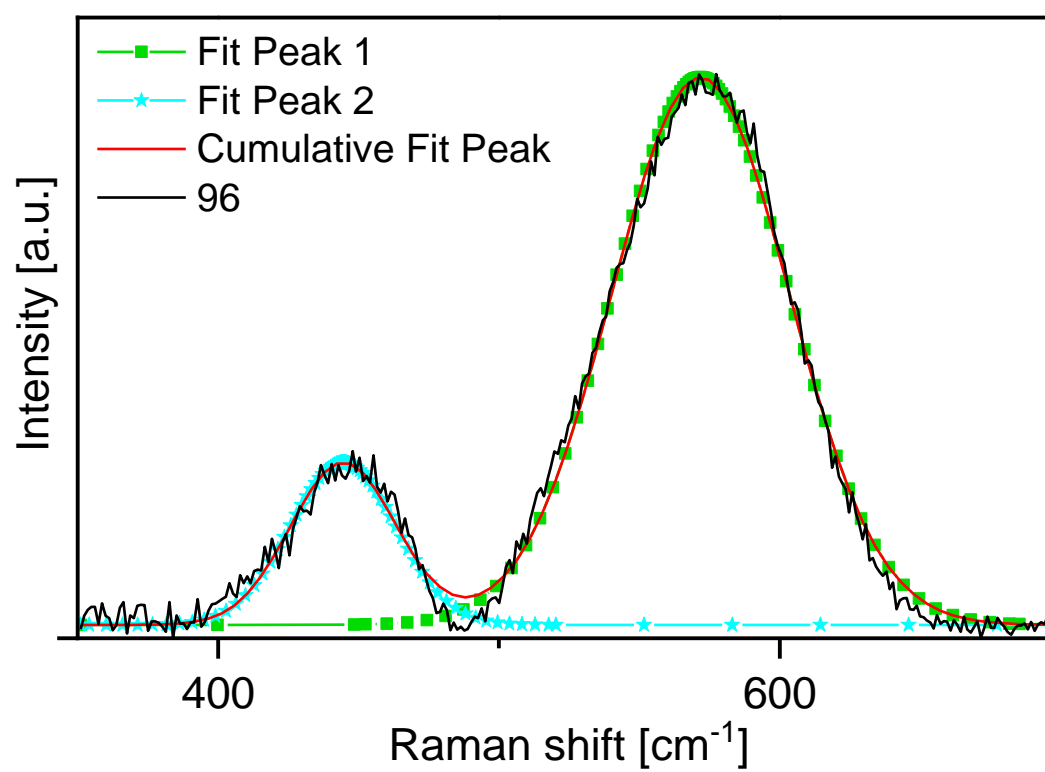
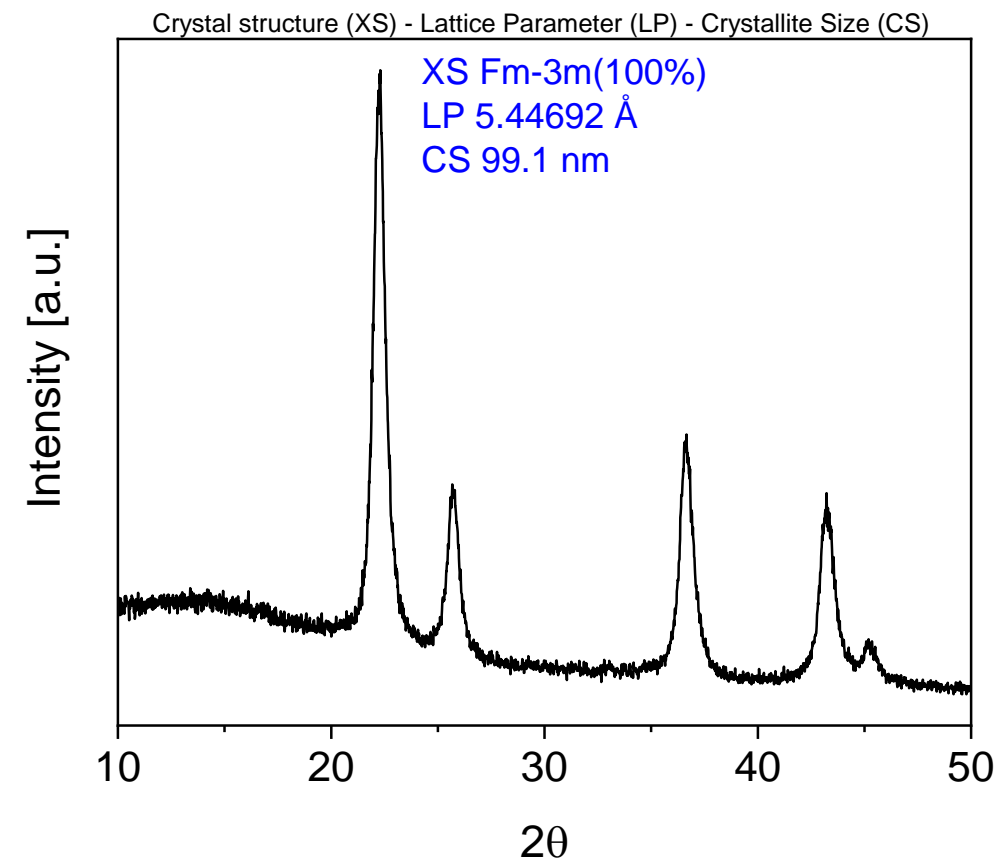
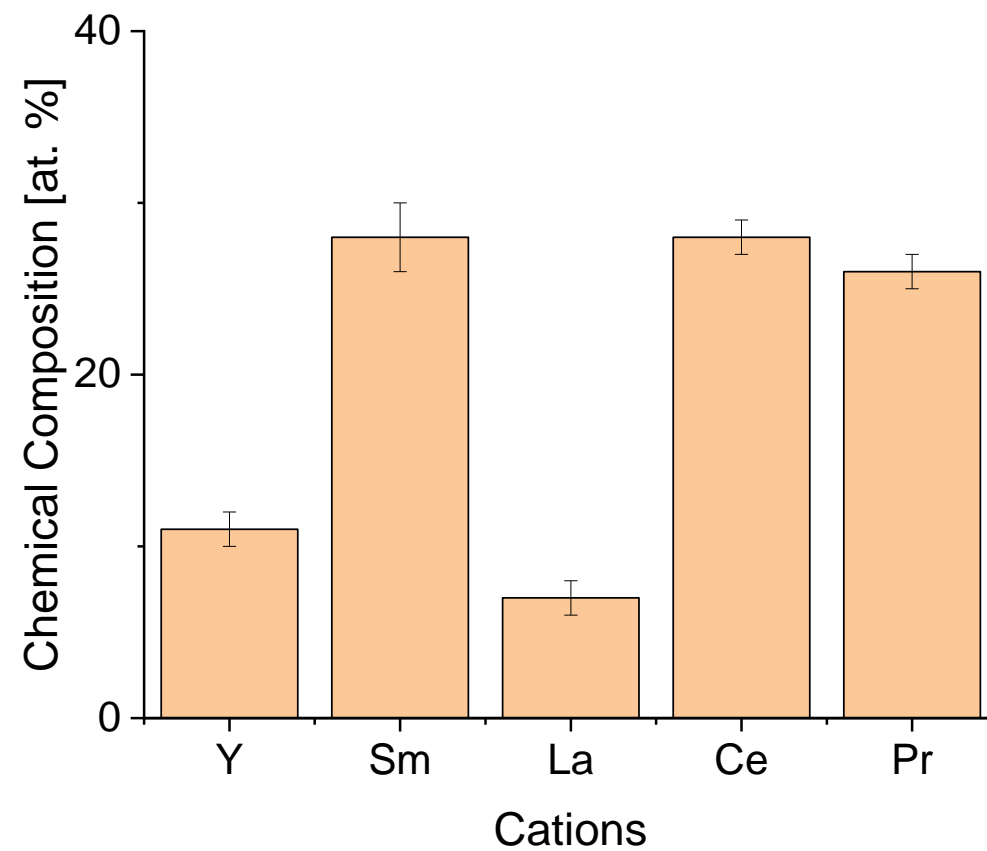




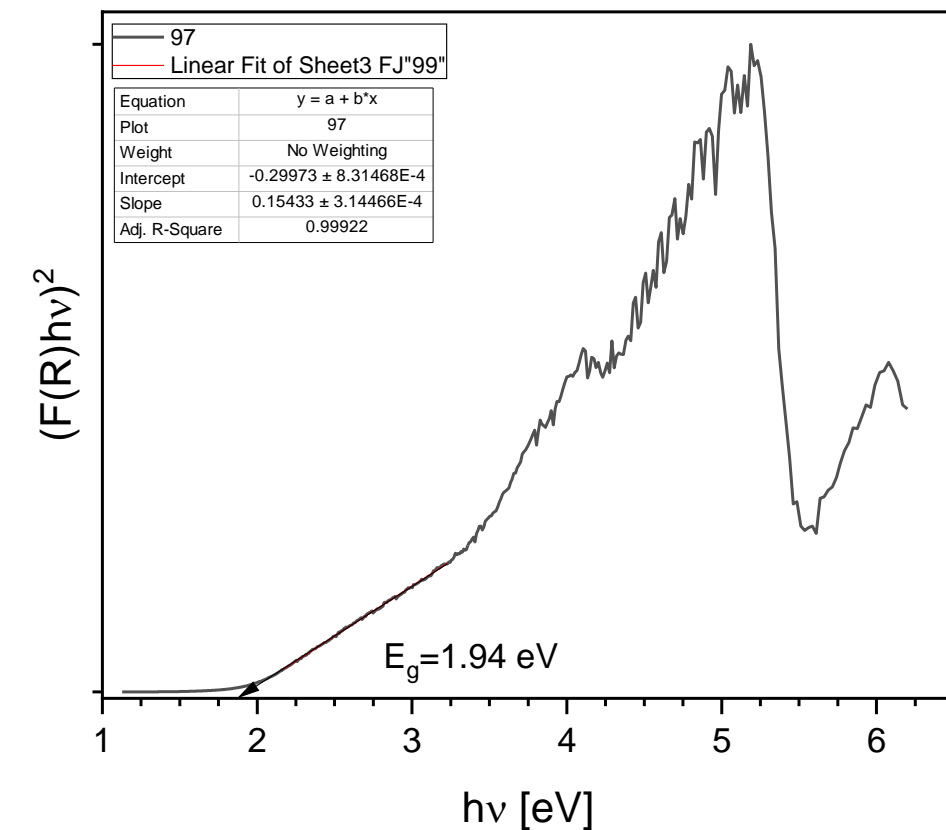
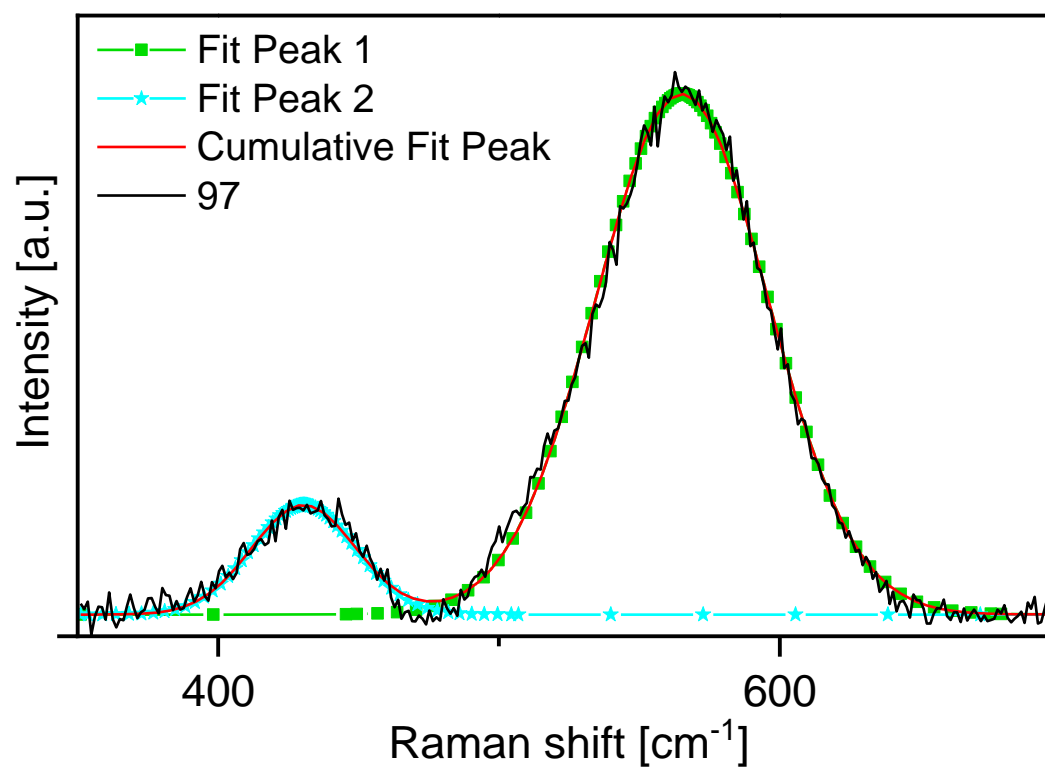
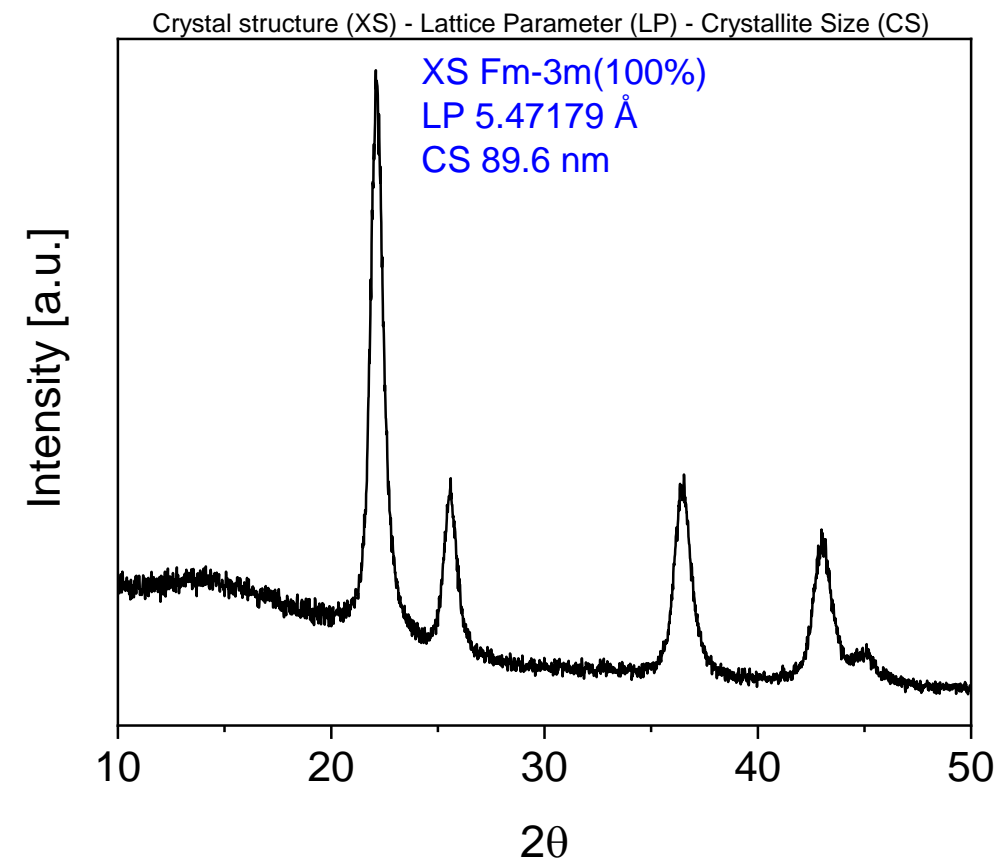
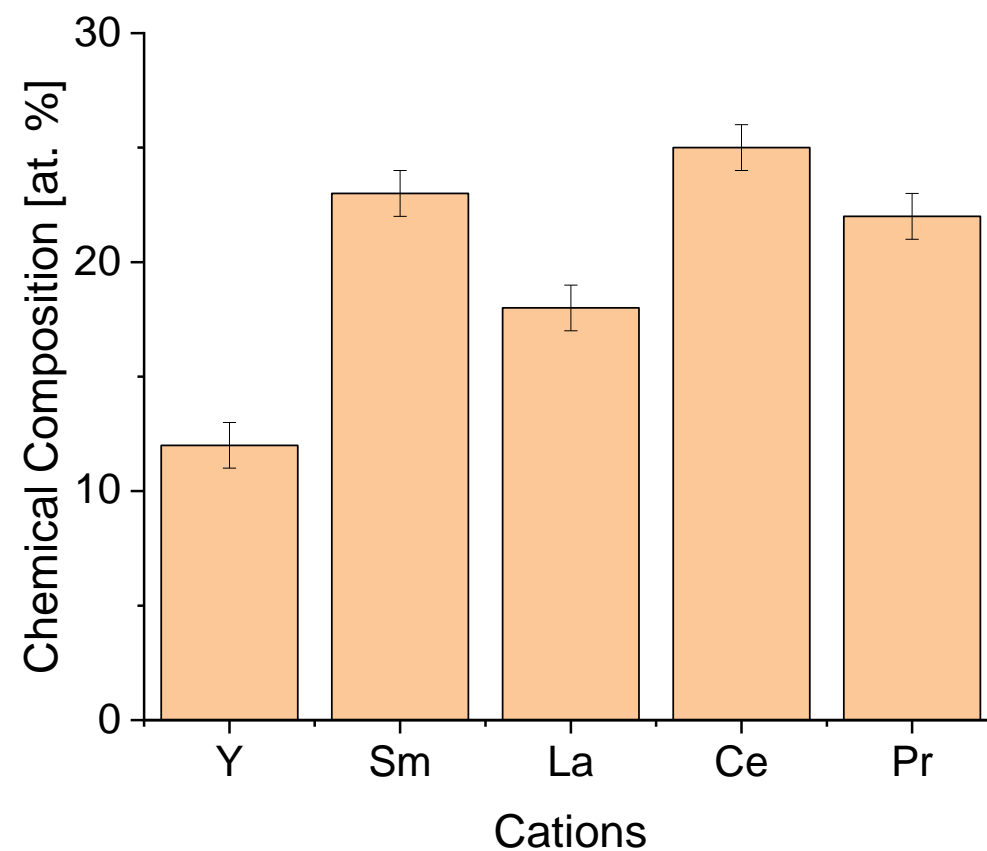
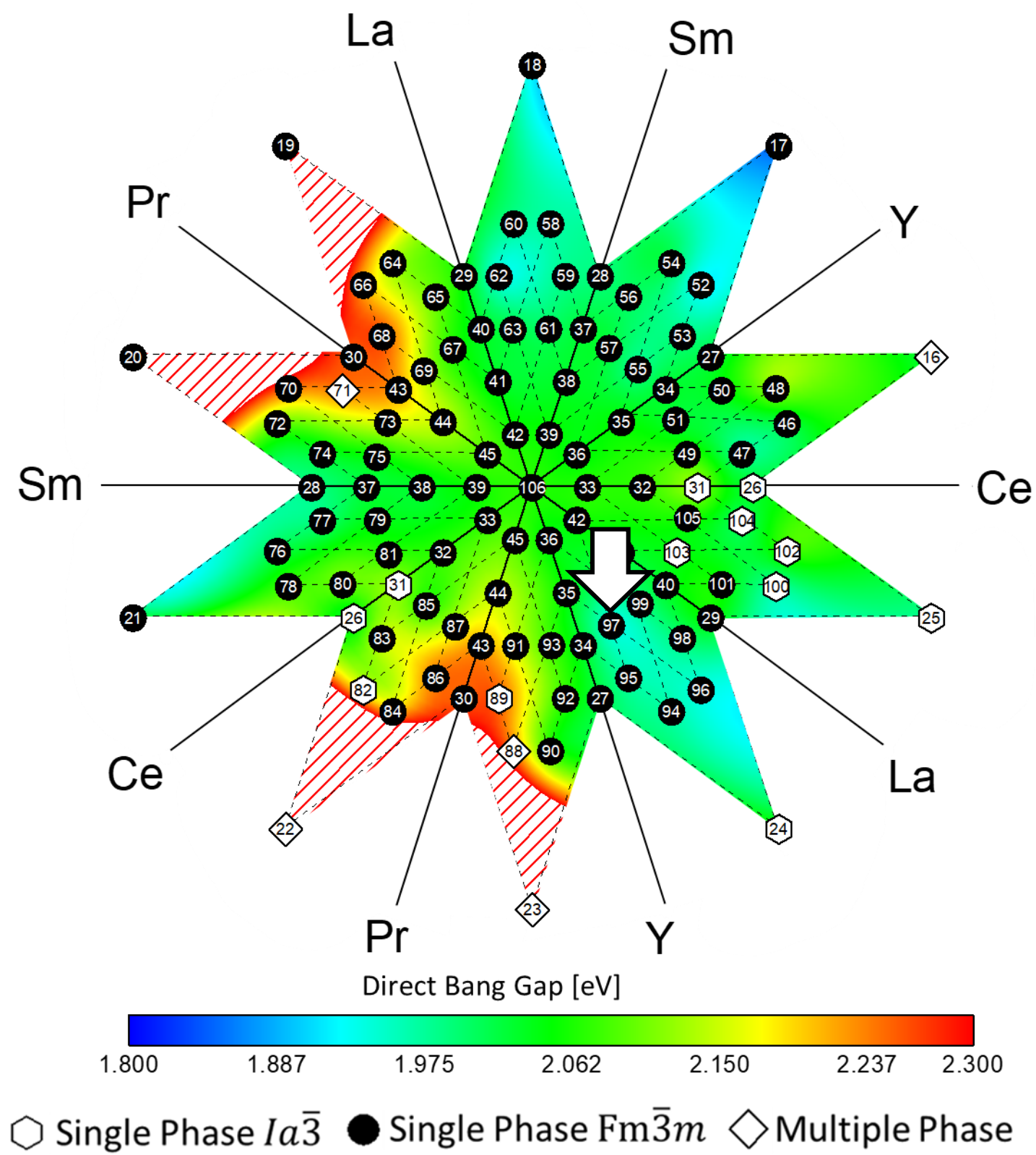
# Sample 96



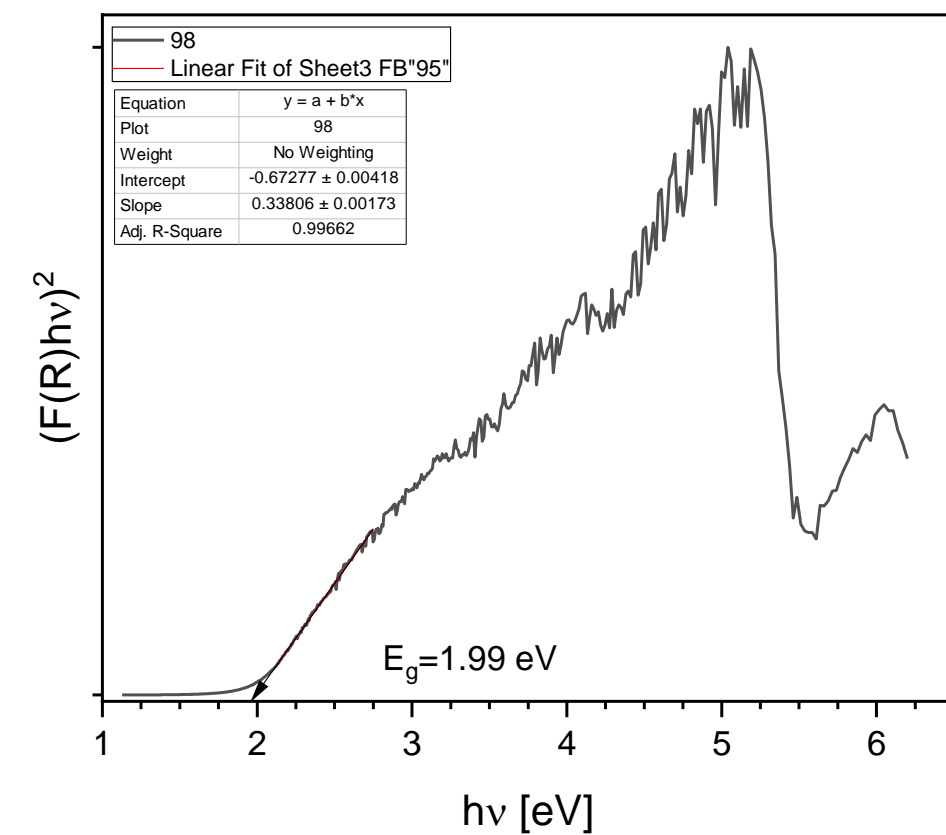
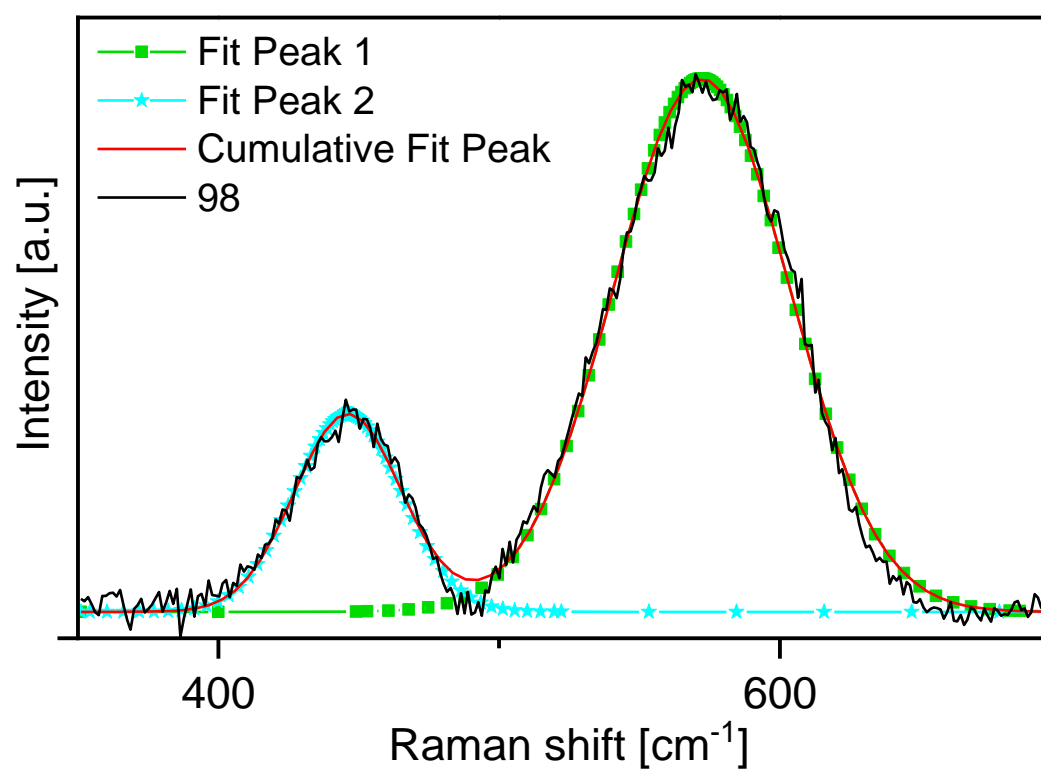
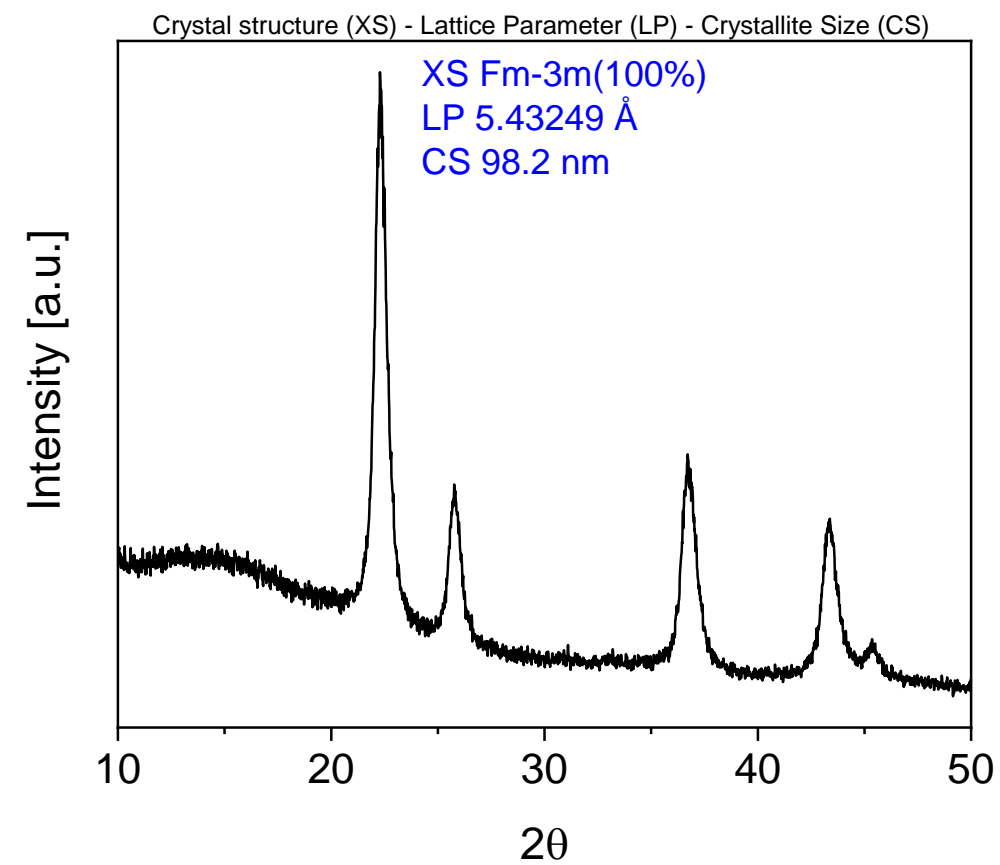
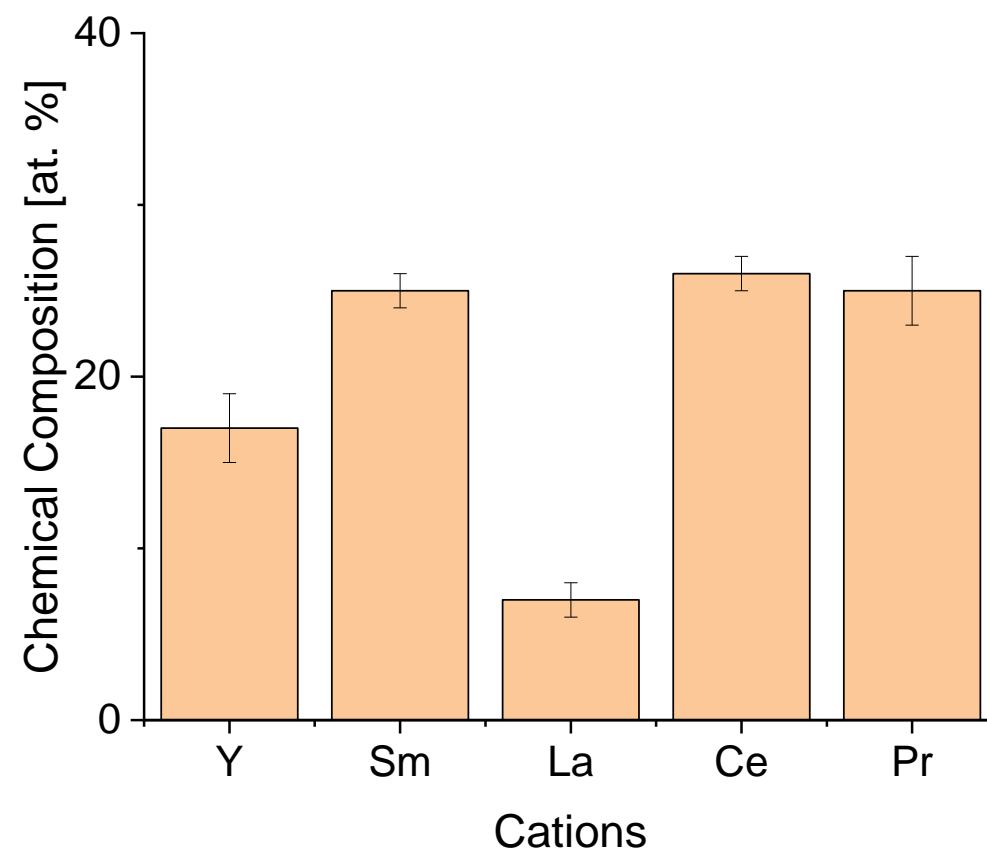
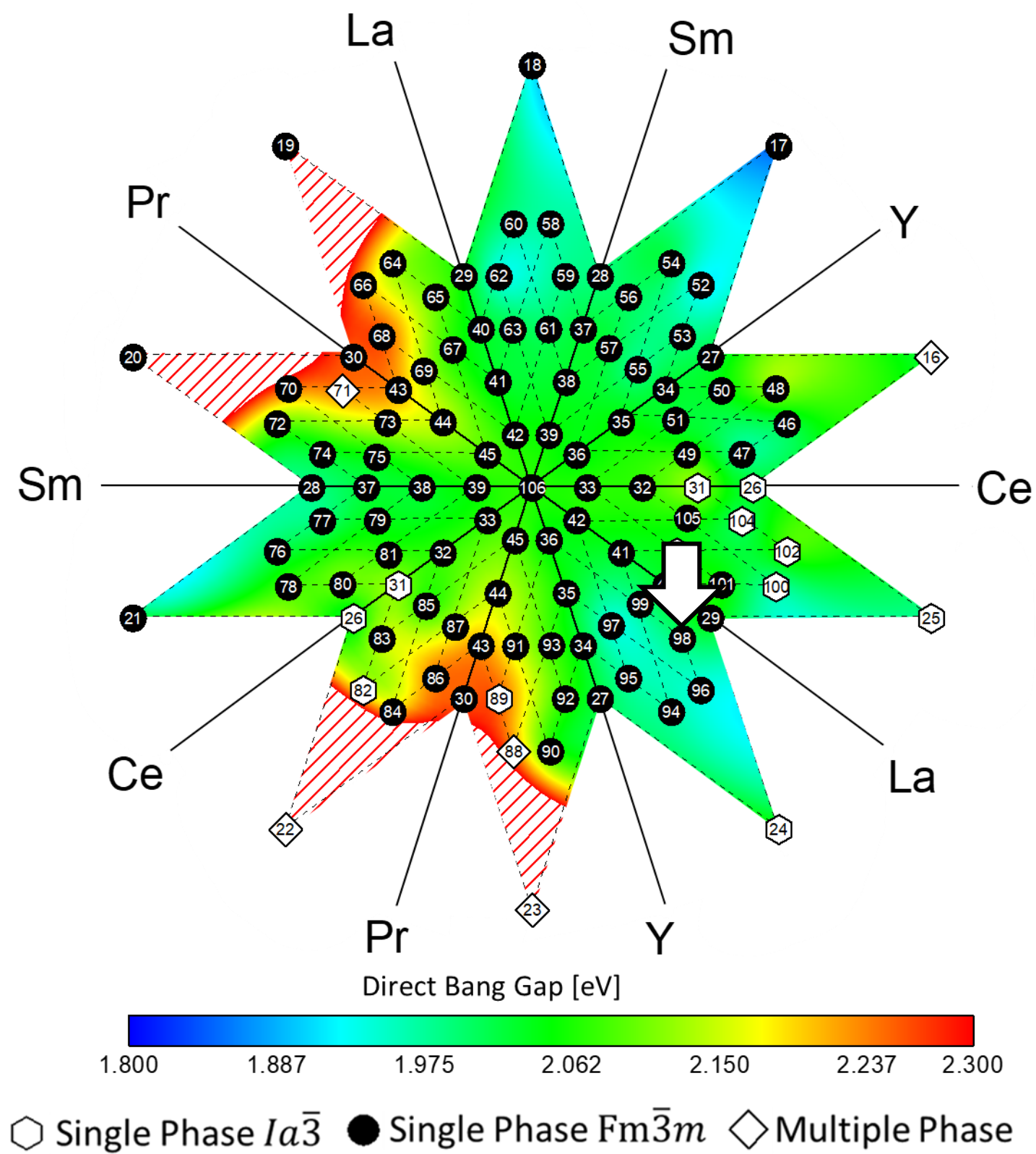
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



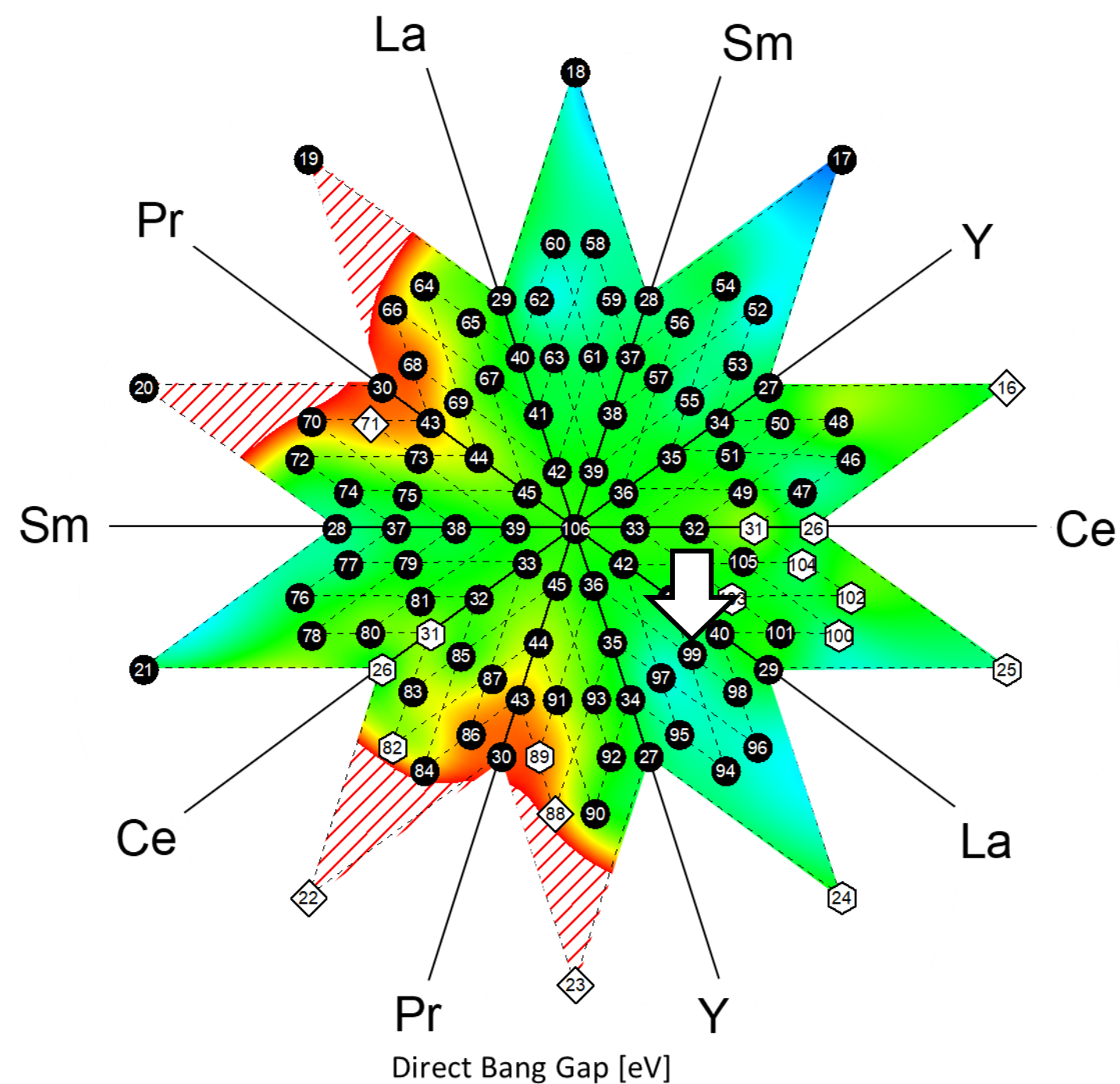
# Sample 97



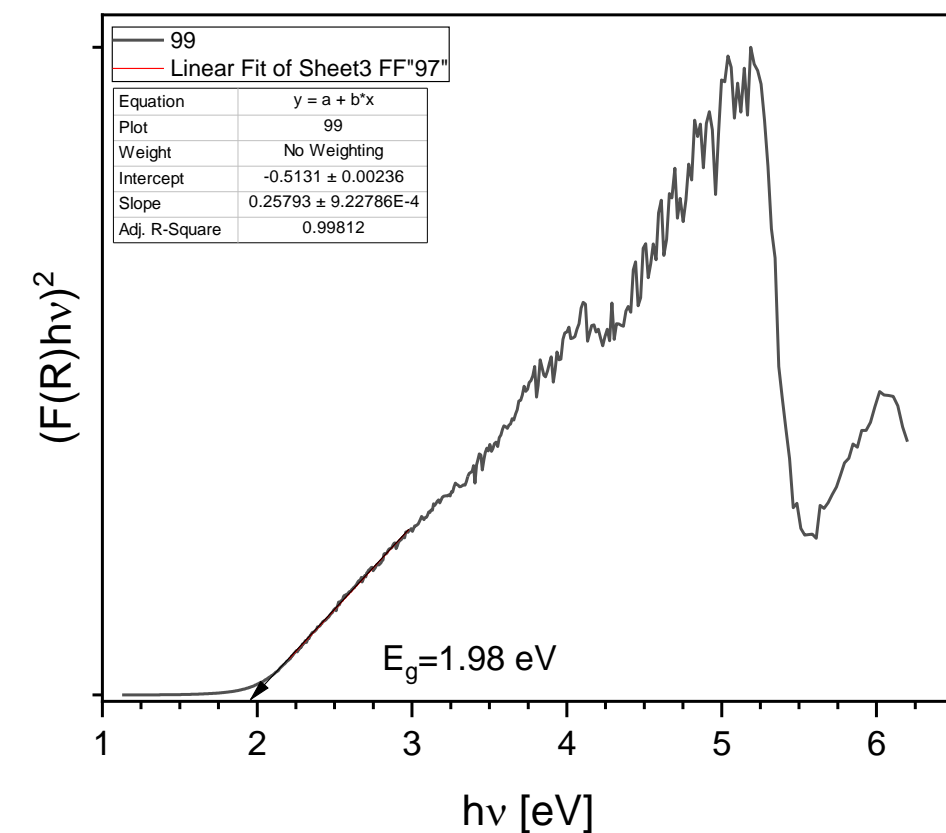
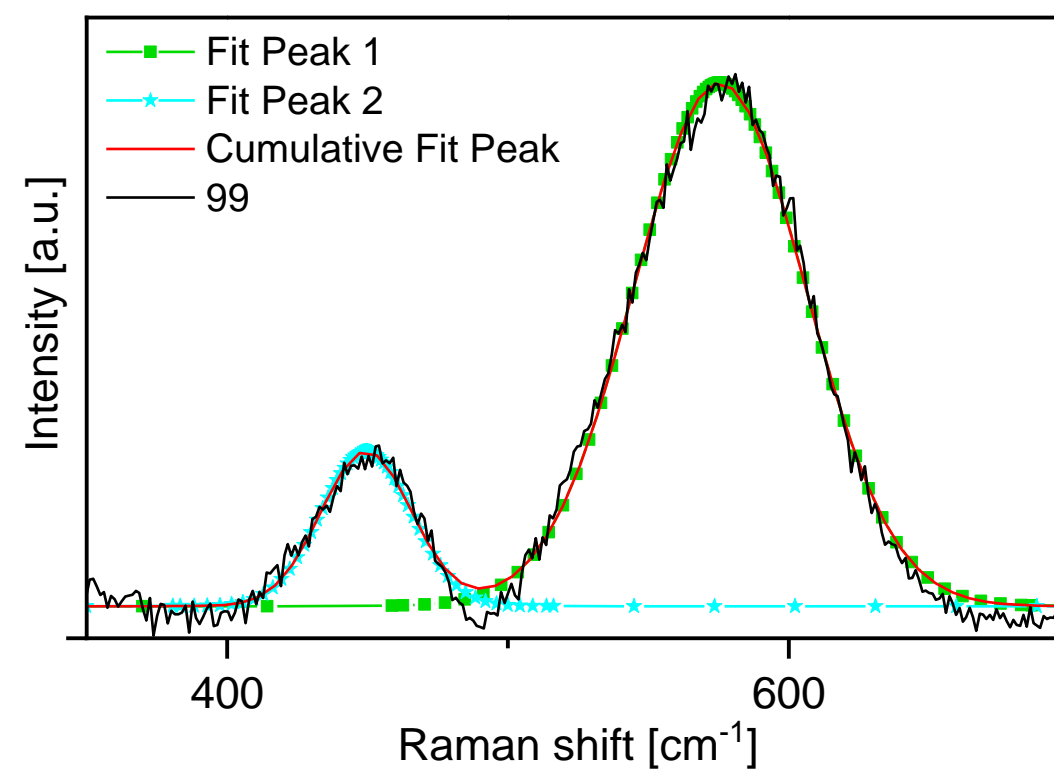
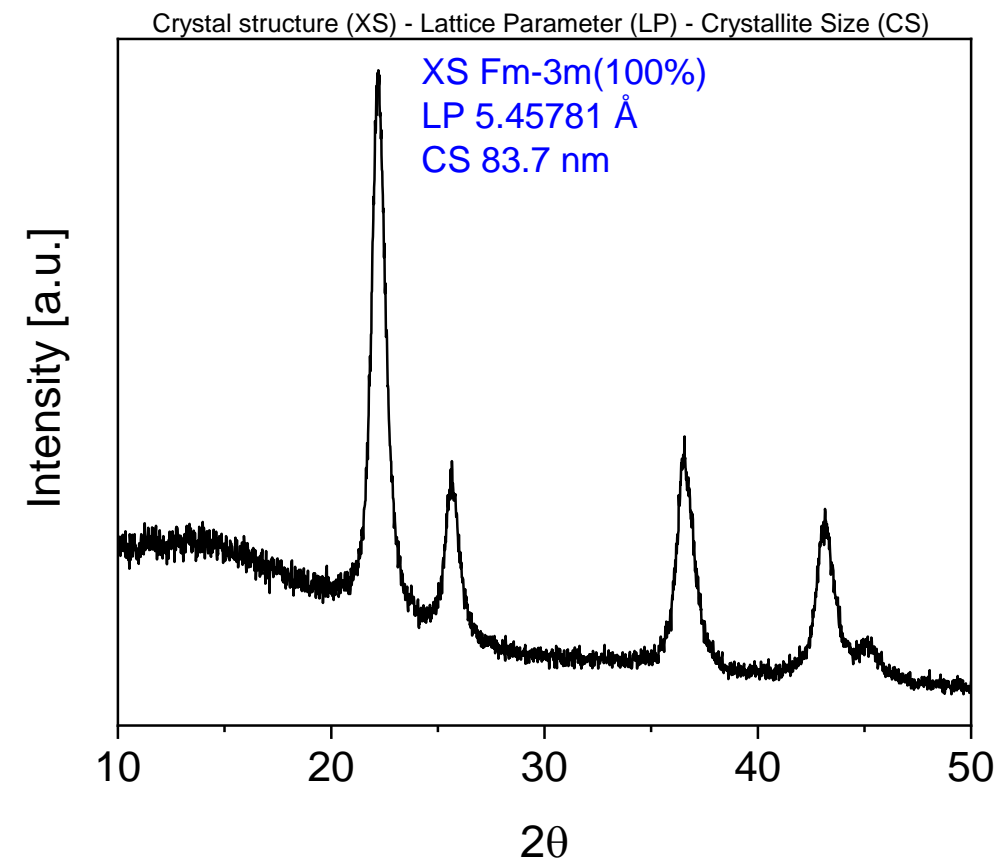
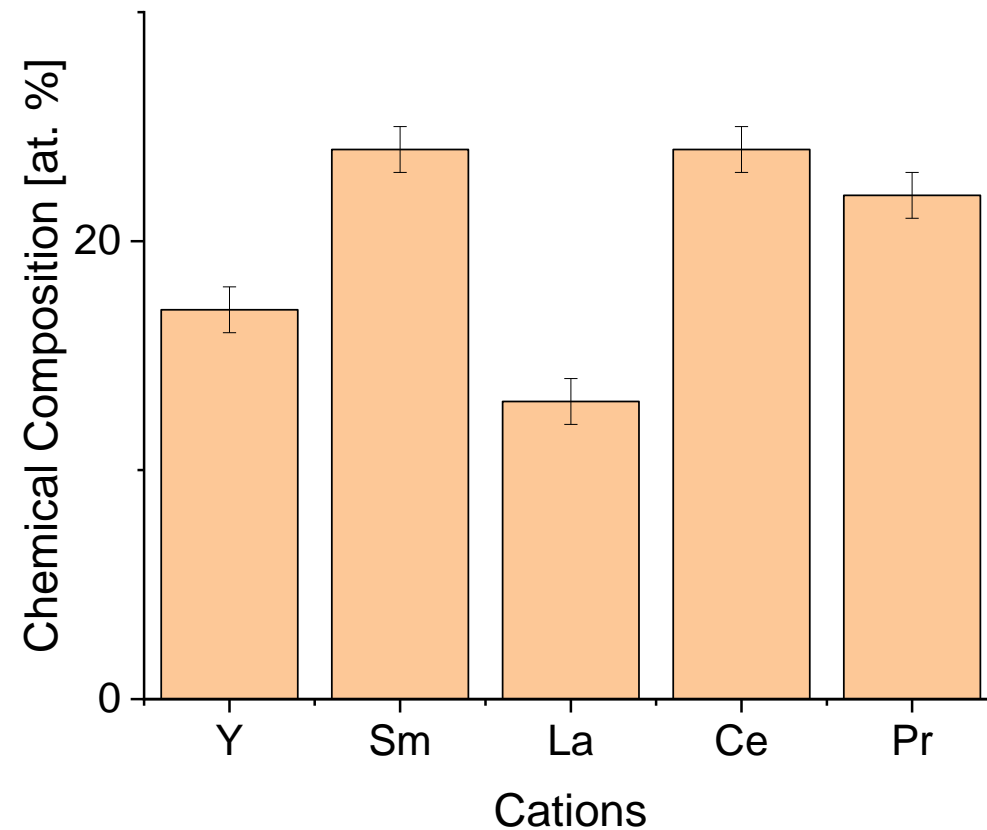
# Sample 98



# Sample 99

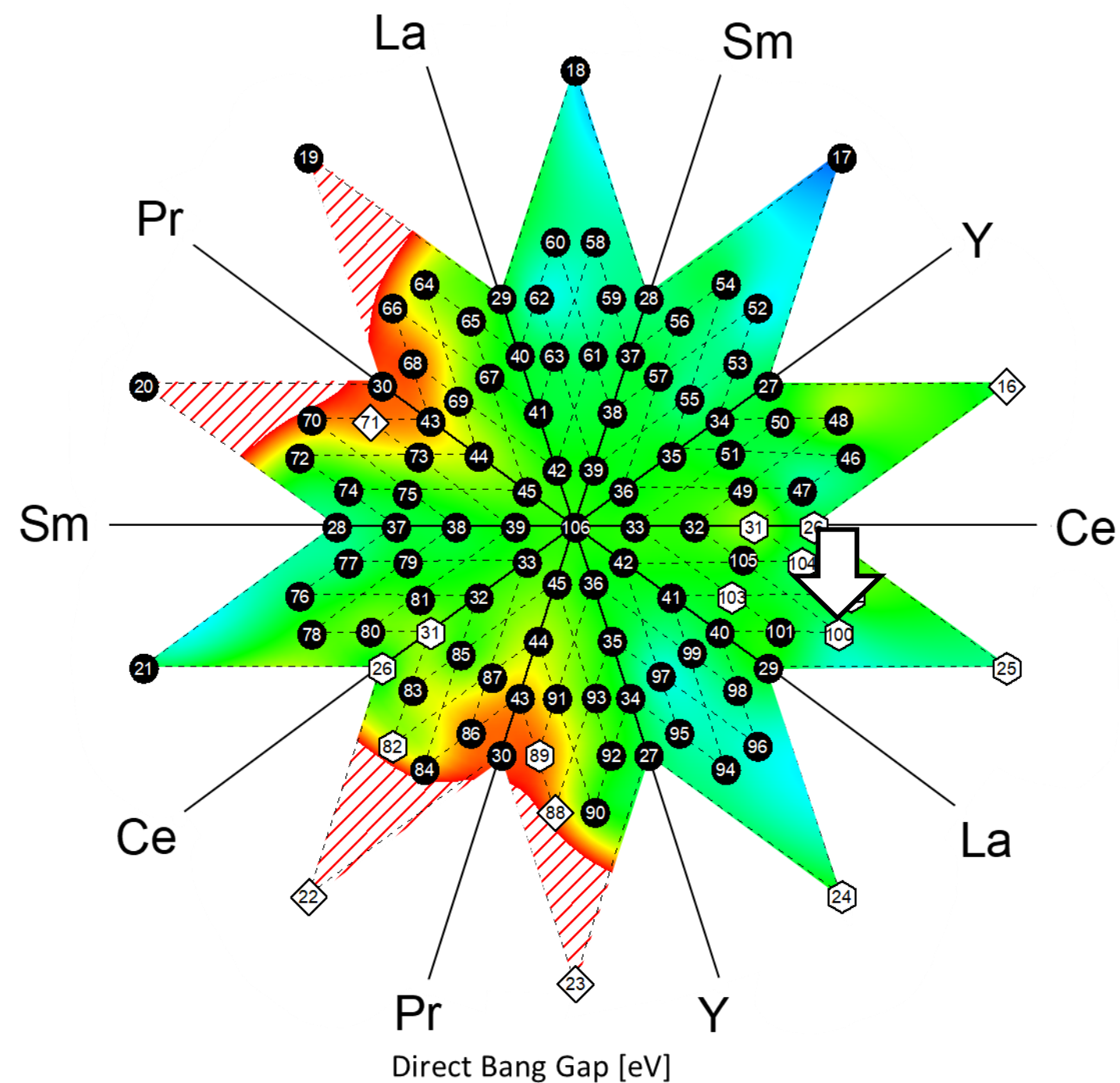


◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

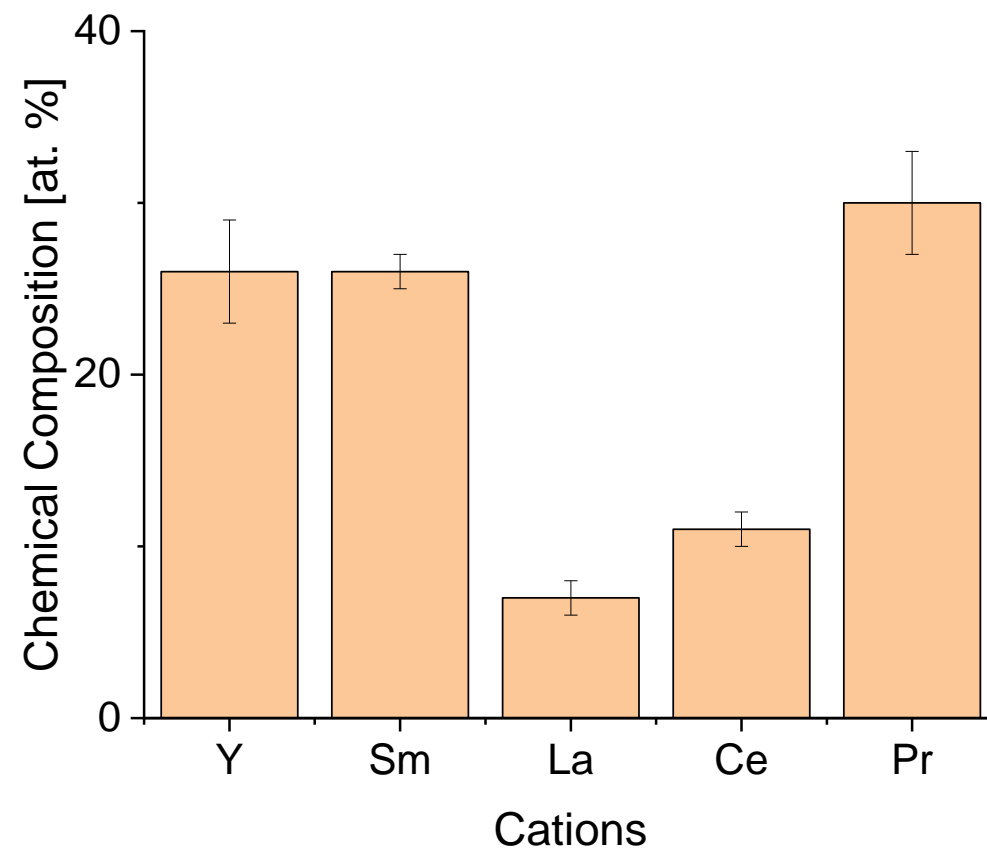




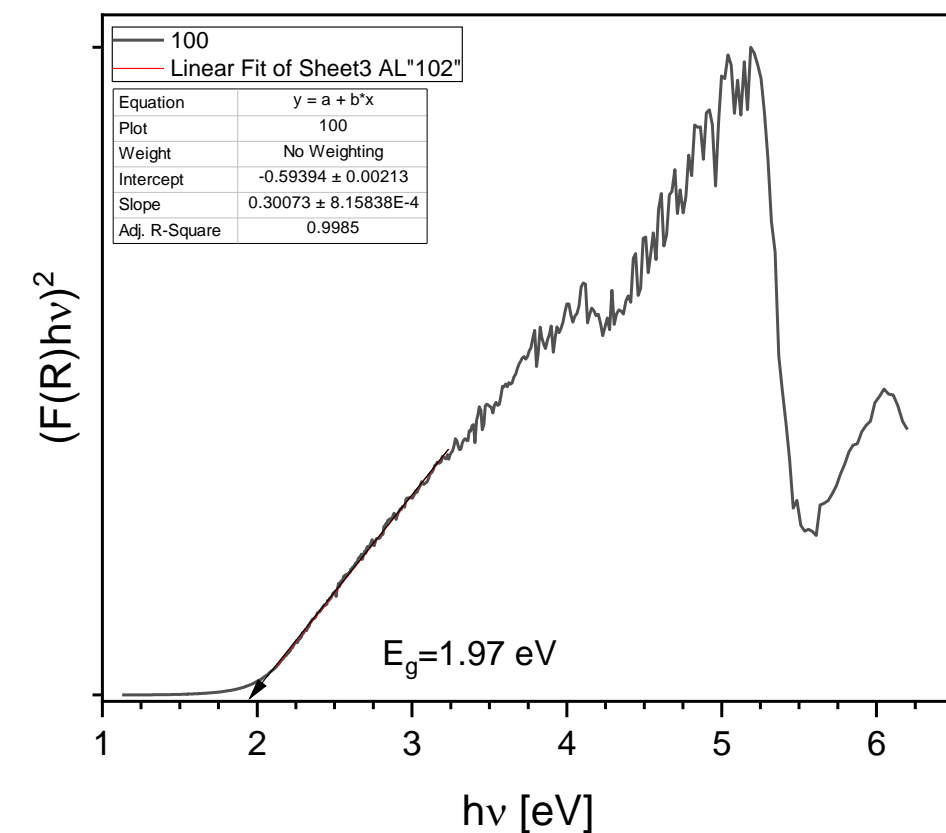
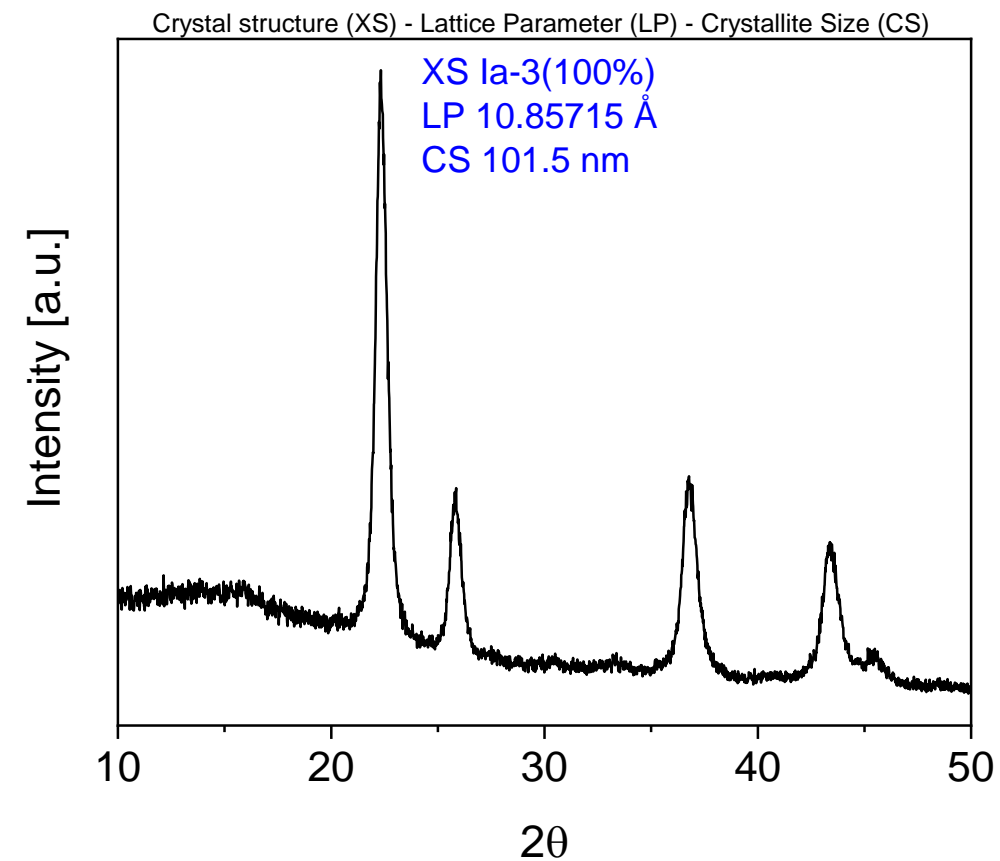
# Sample 100



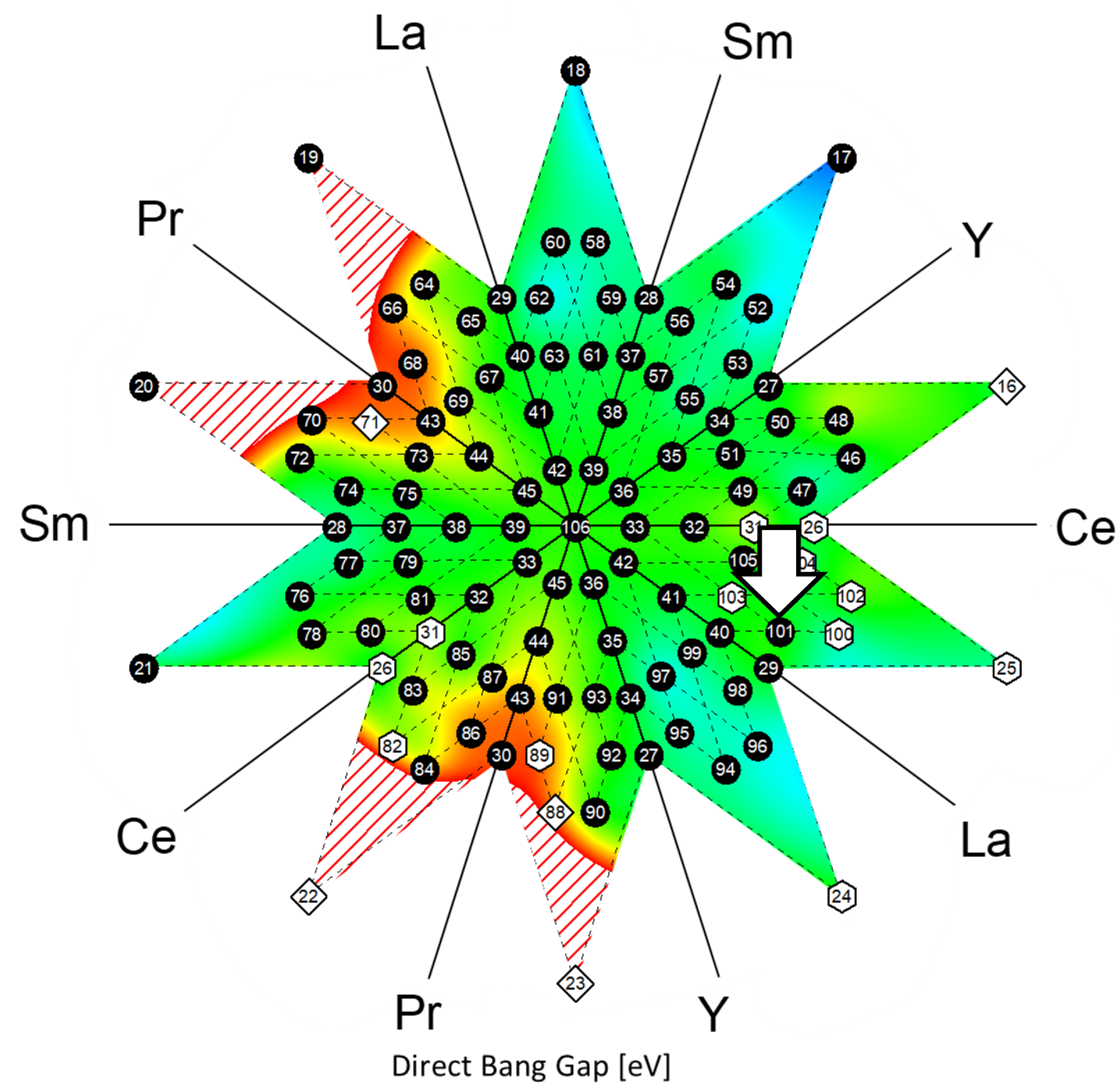
○ Single Phase  $Ia\bar{3}$ 
● Single Phase  $Fm\bar{3}m$ 
◇ Multiple Phase



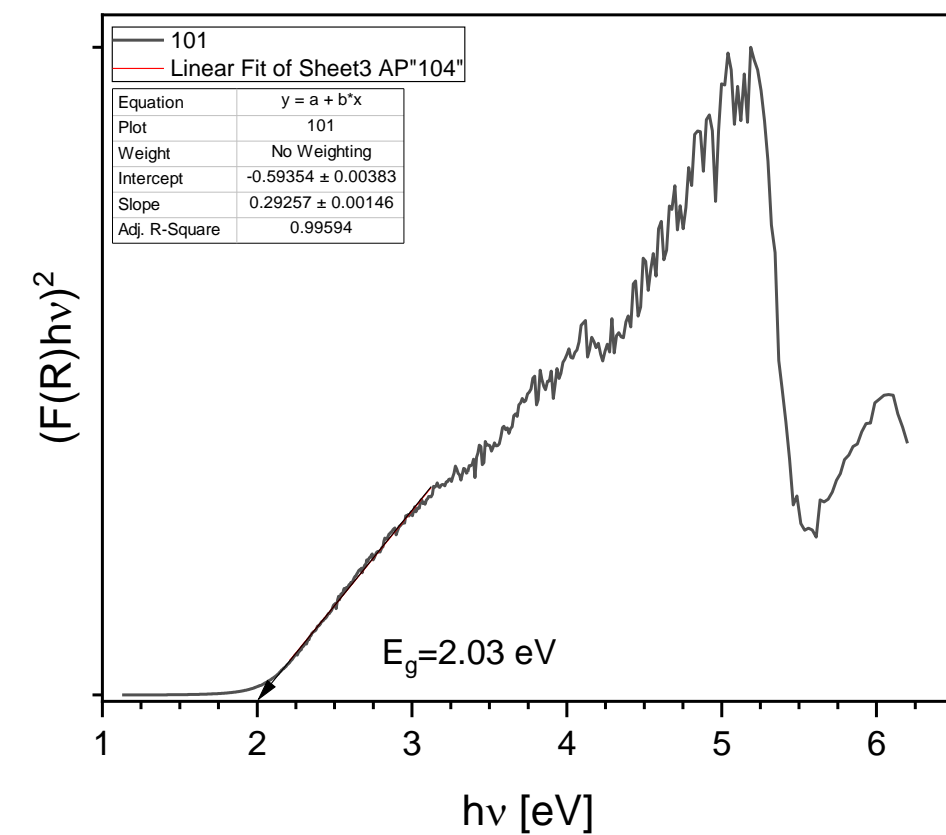
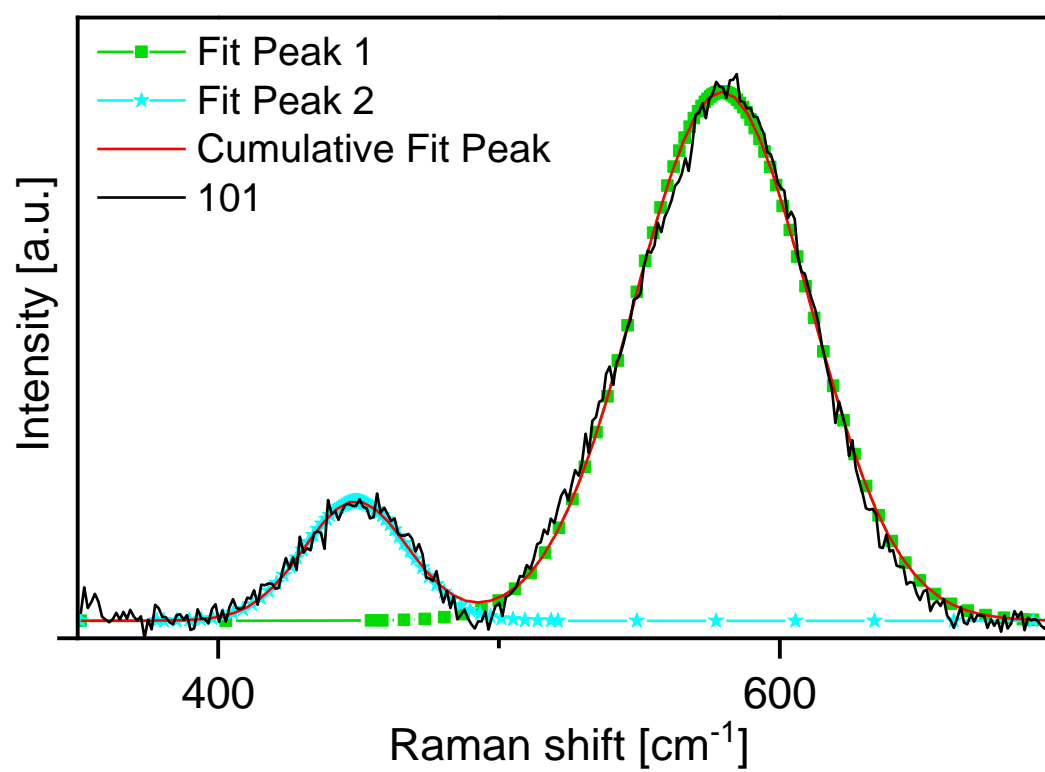
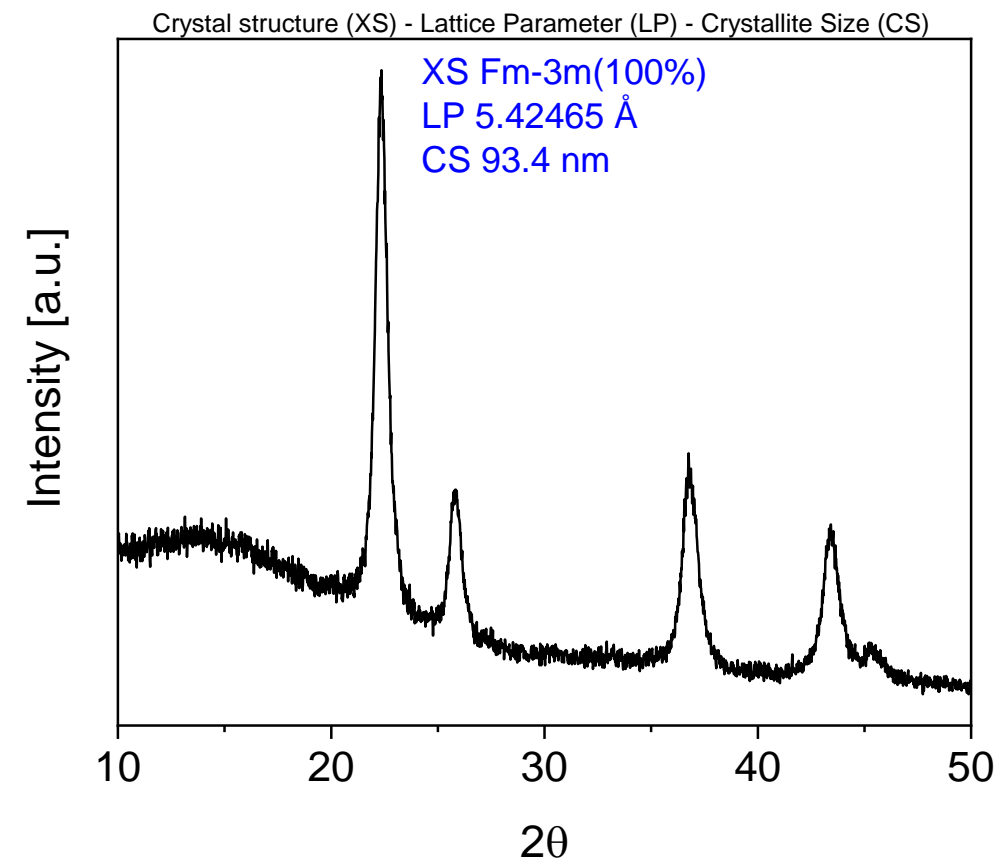
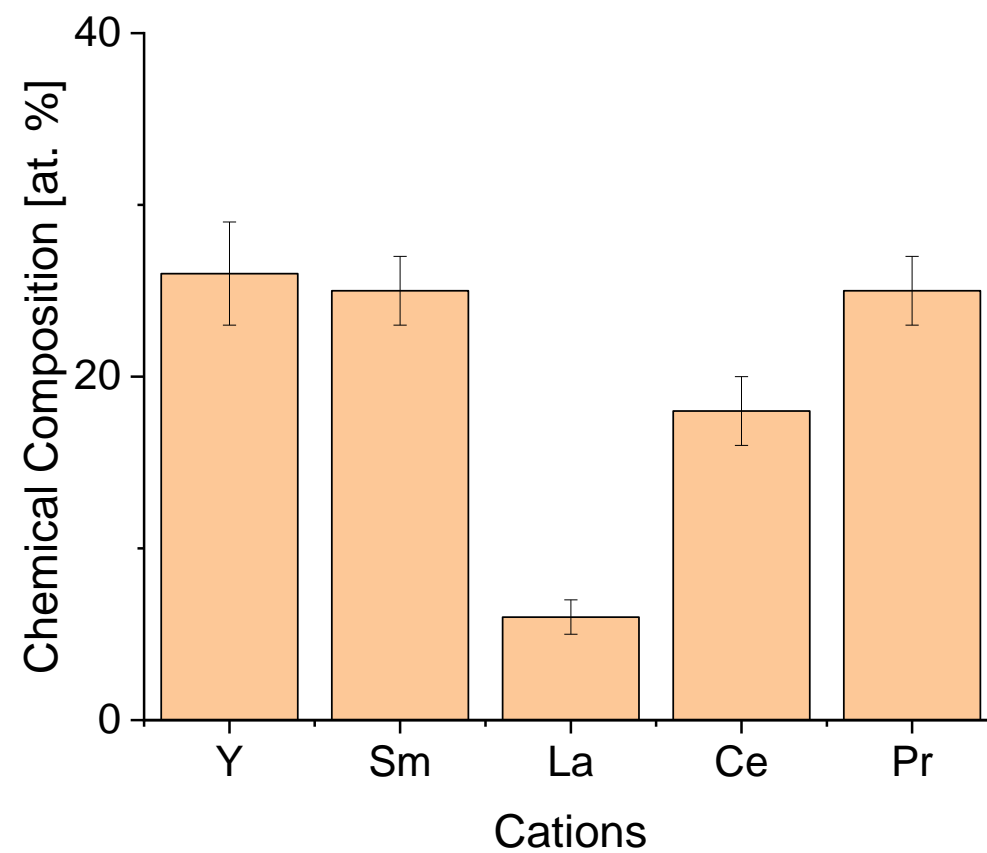
N.A.



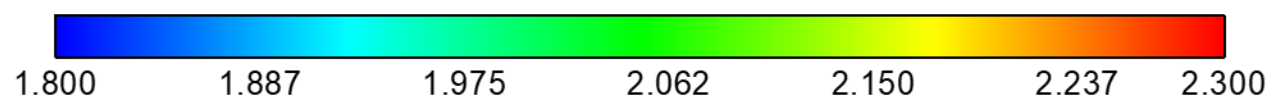
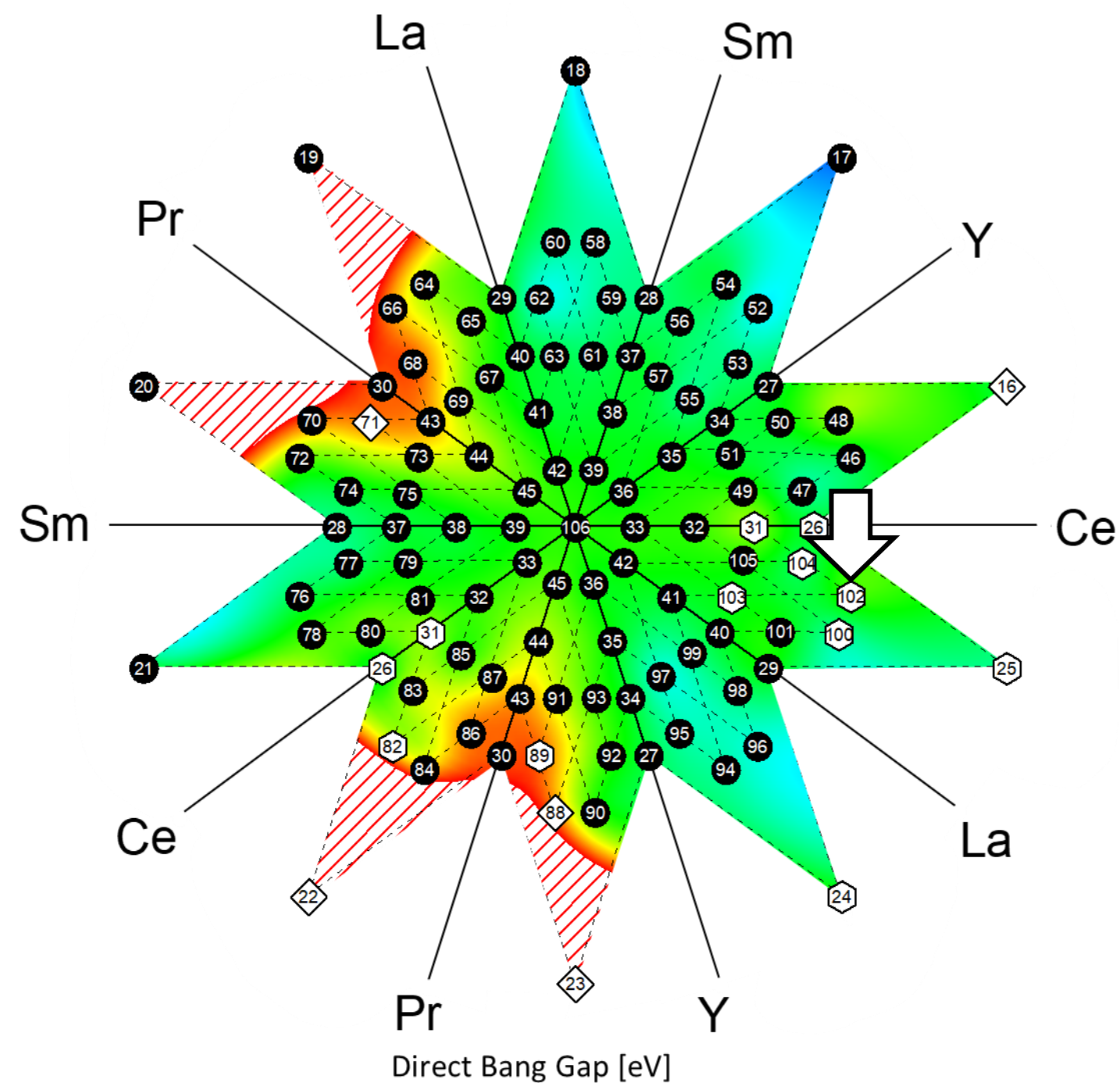
# Sample 101



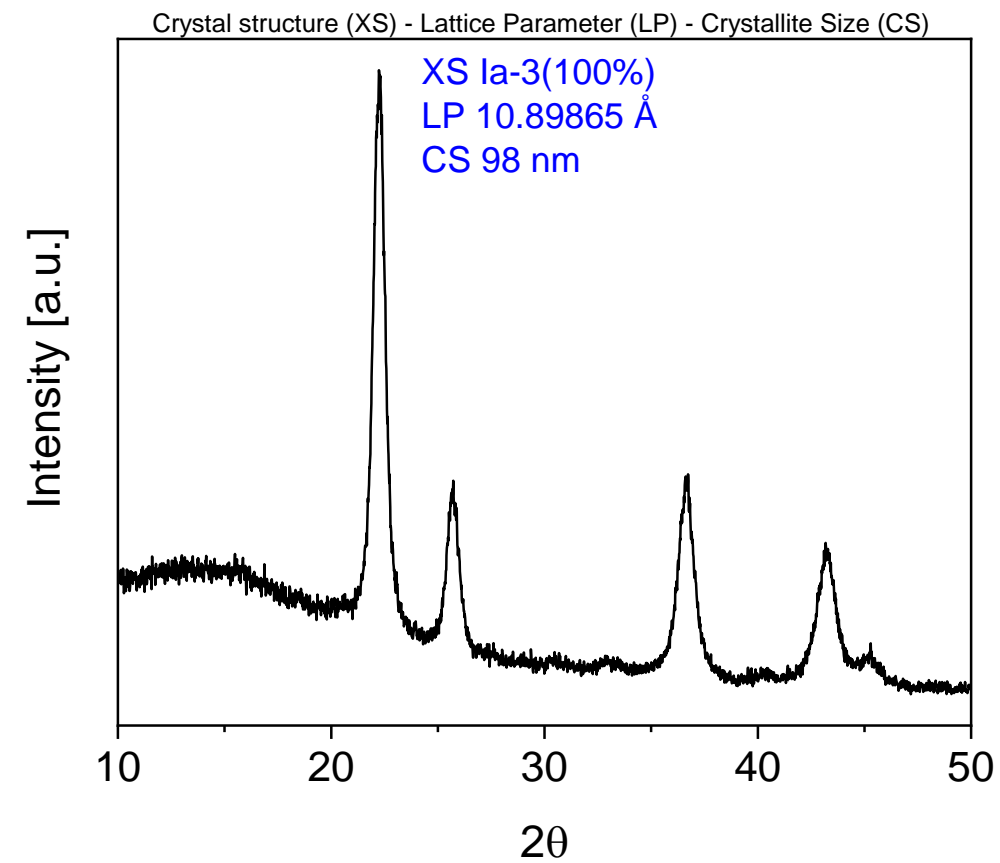
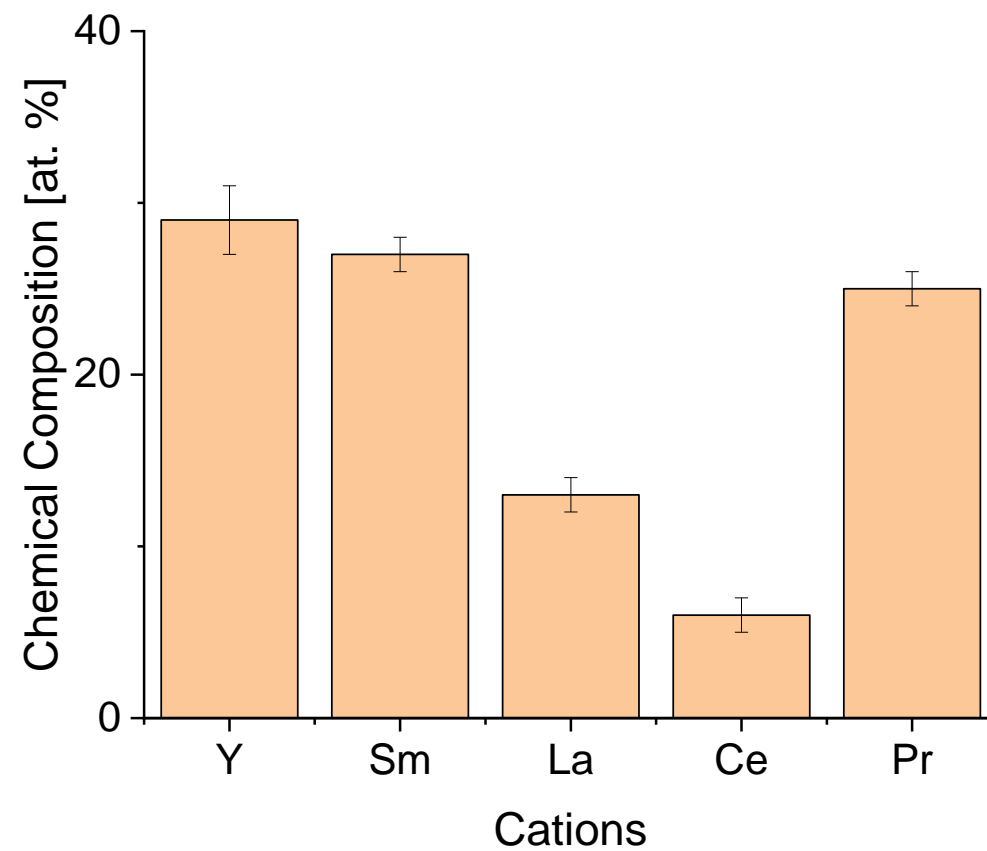
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



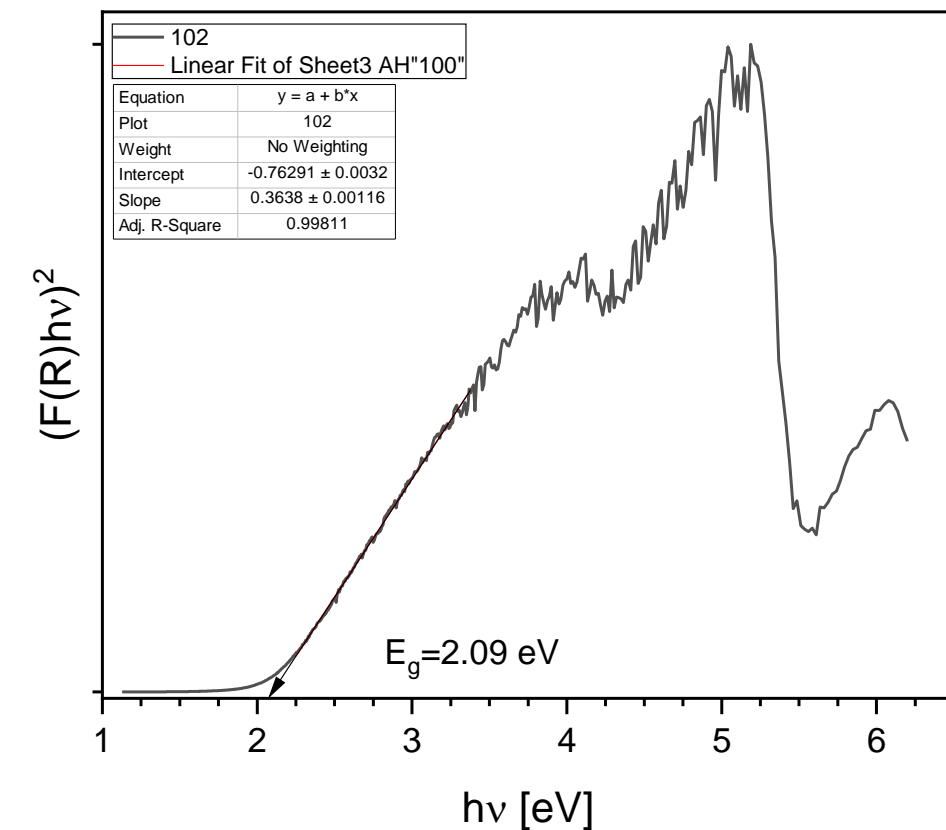
# Sample 102



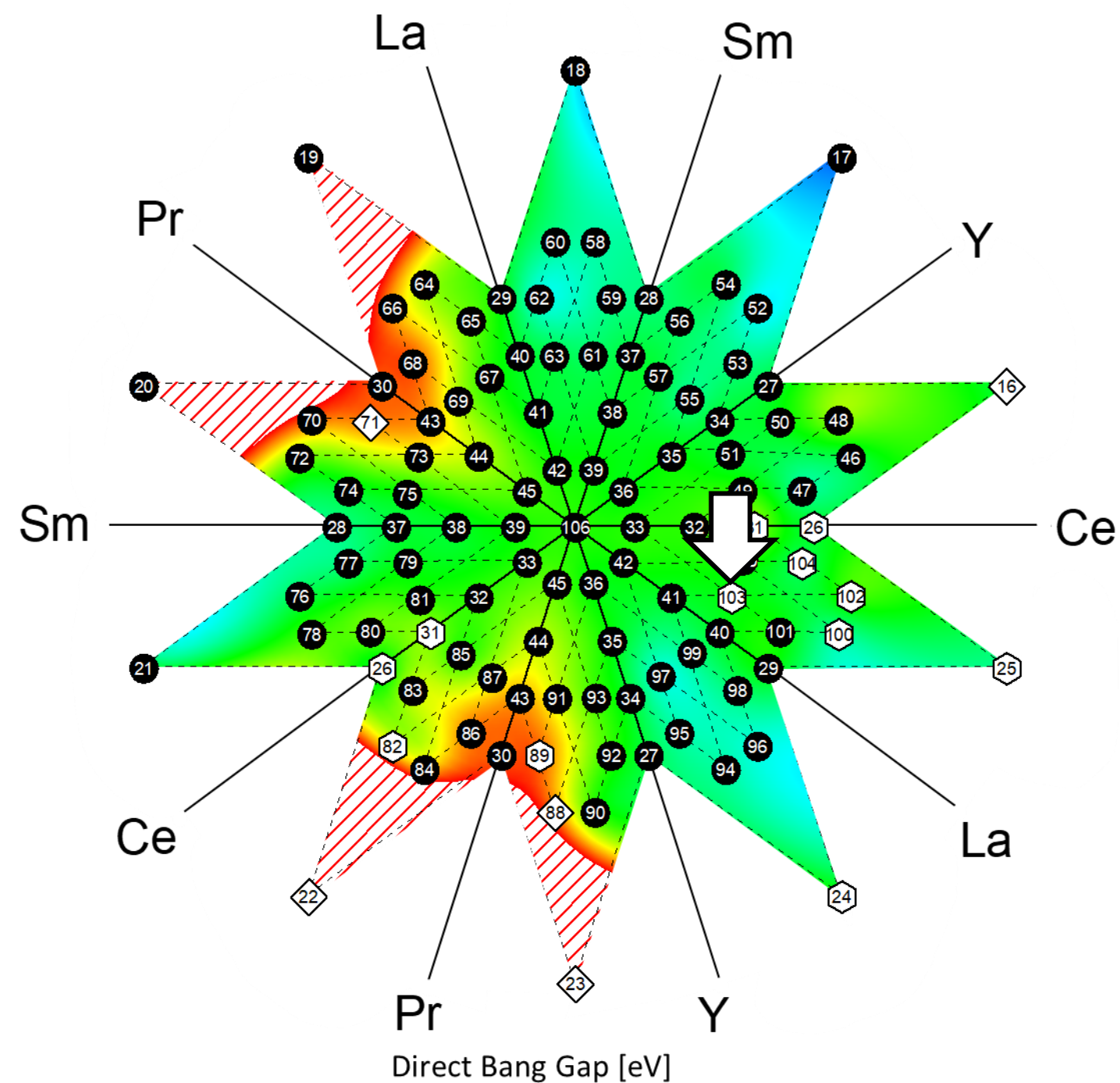
◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



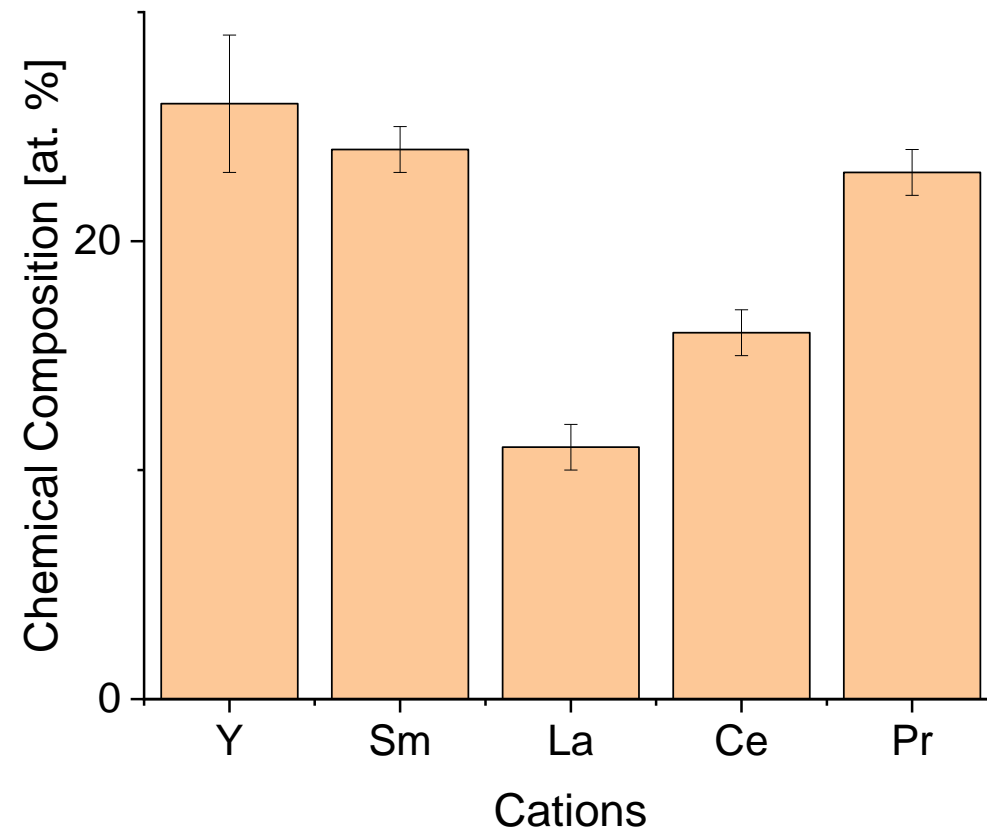
N.A.



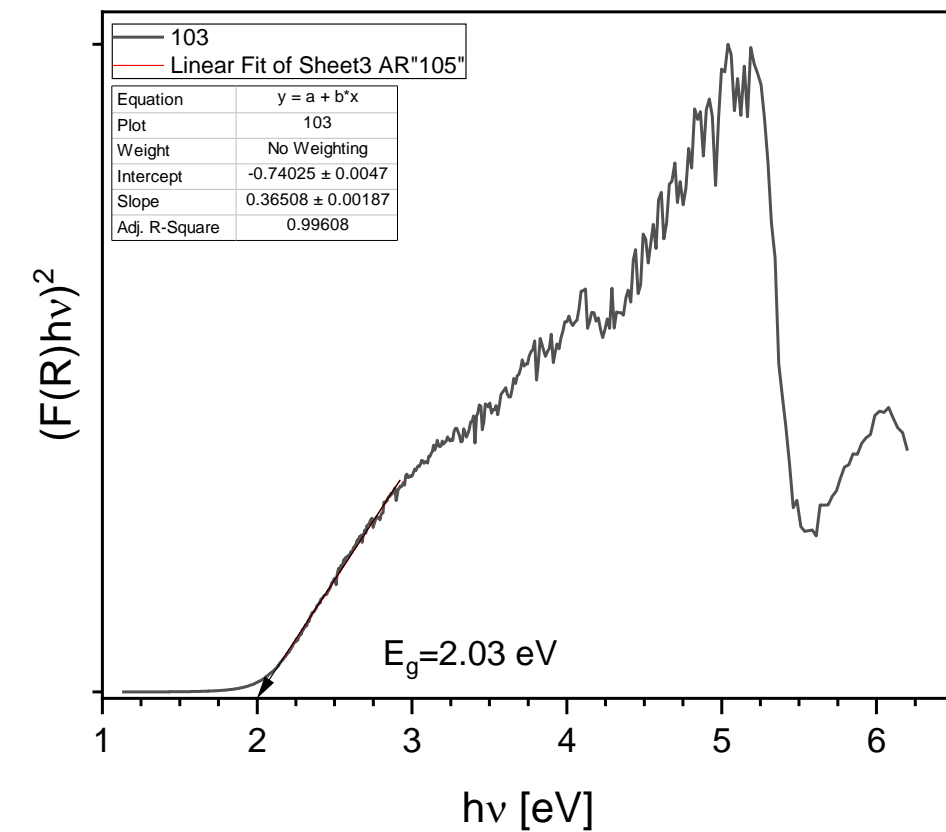
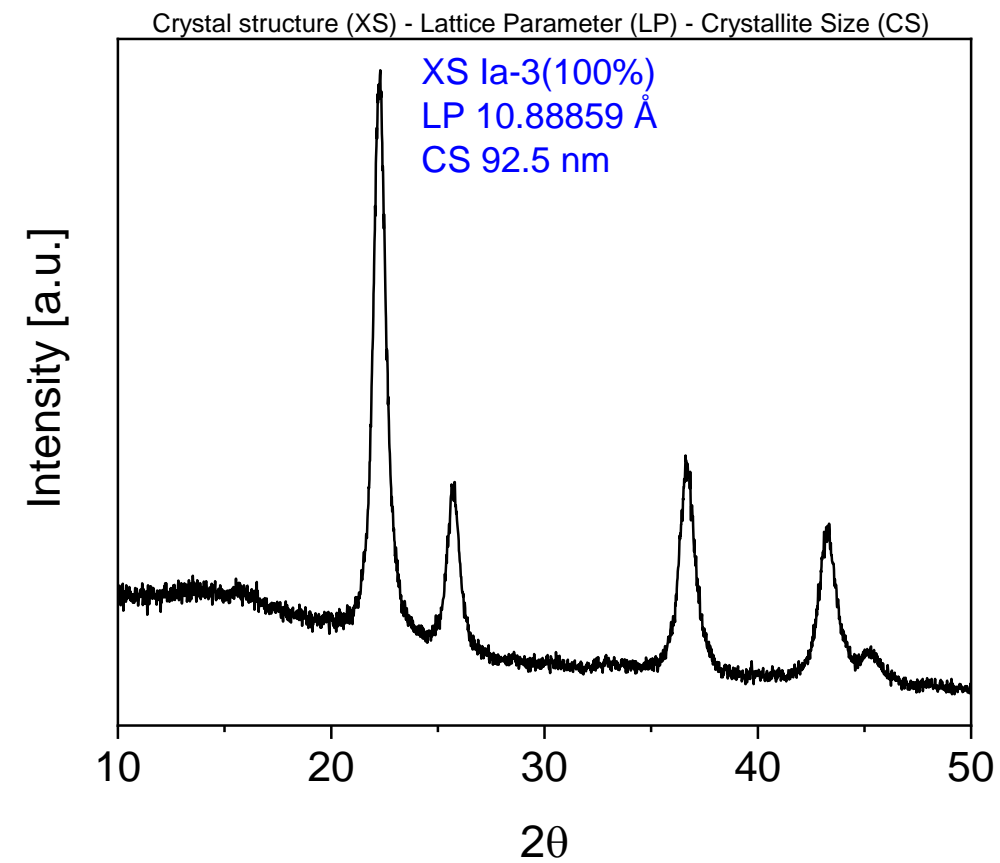
# Sample 103



○ Single Phase  $Ia\bar{3}$ 
 Single Phase  $Fm\bar{3}m$ 
◇ Multiple Phase

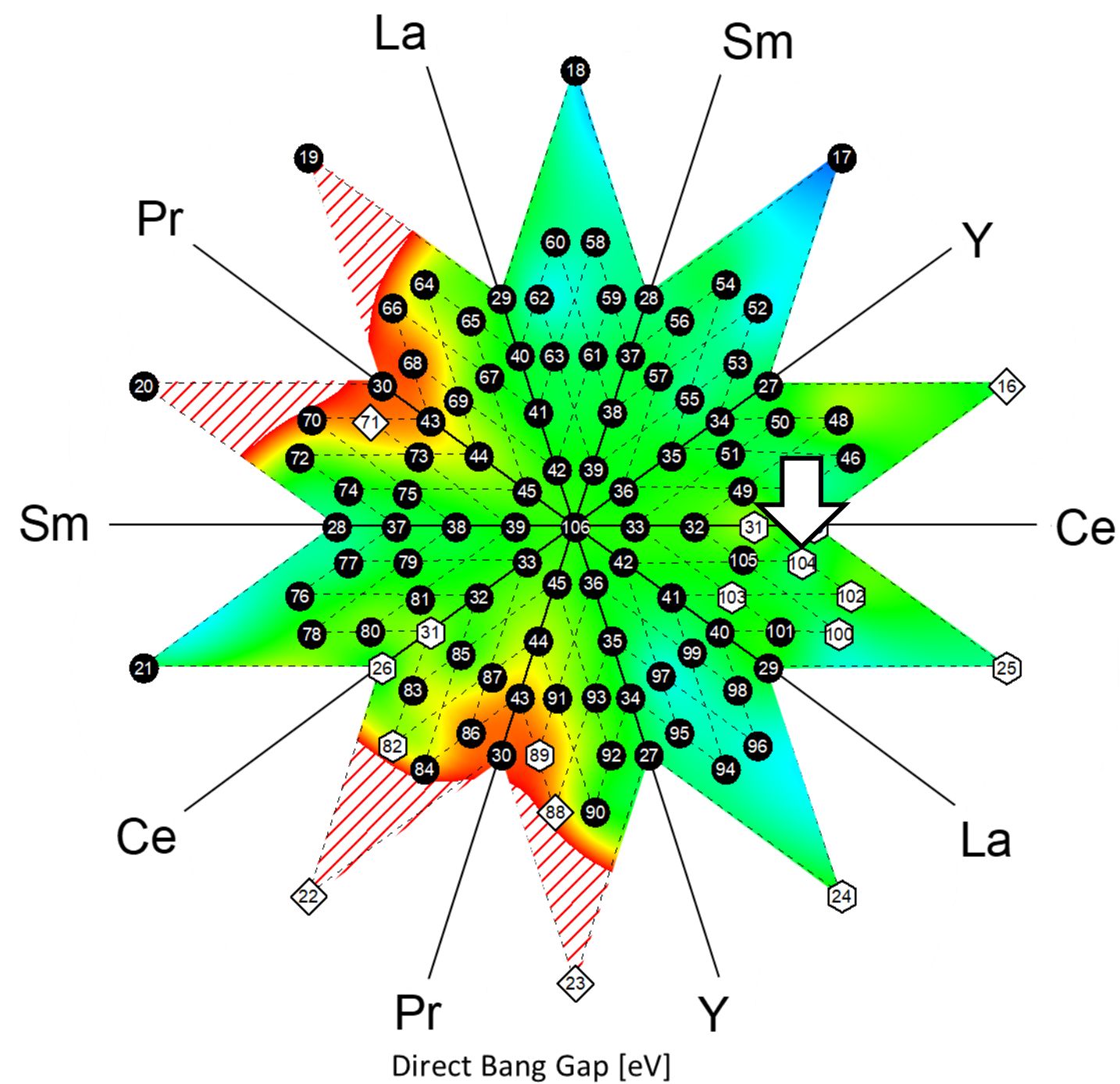


N.A.

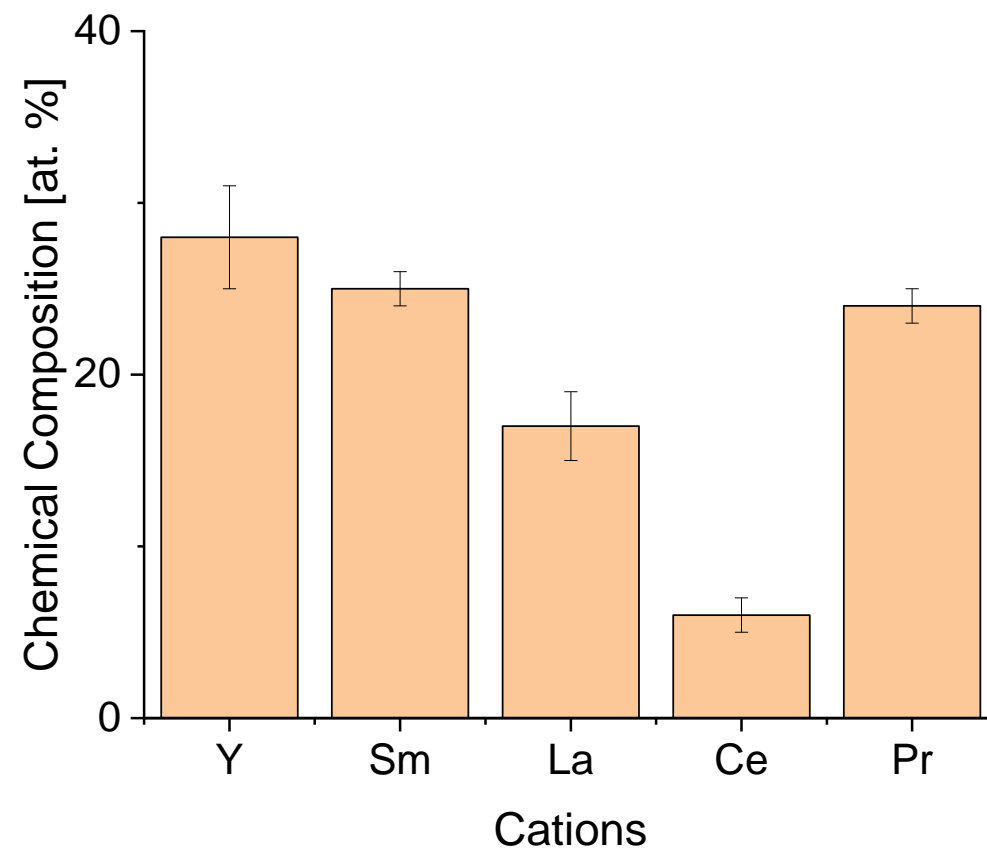




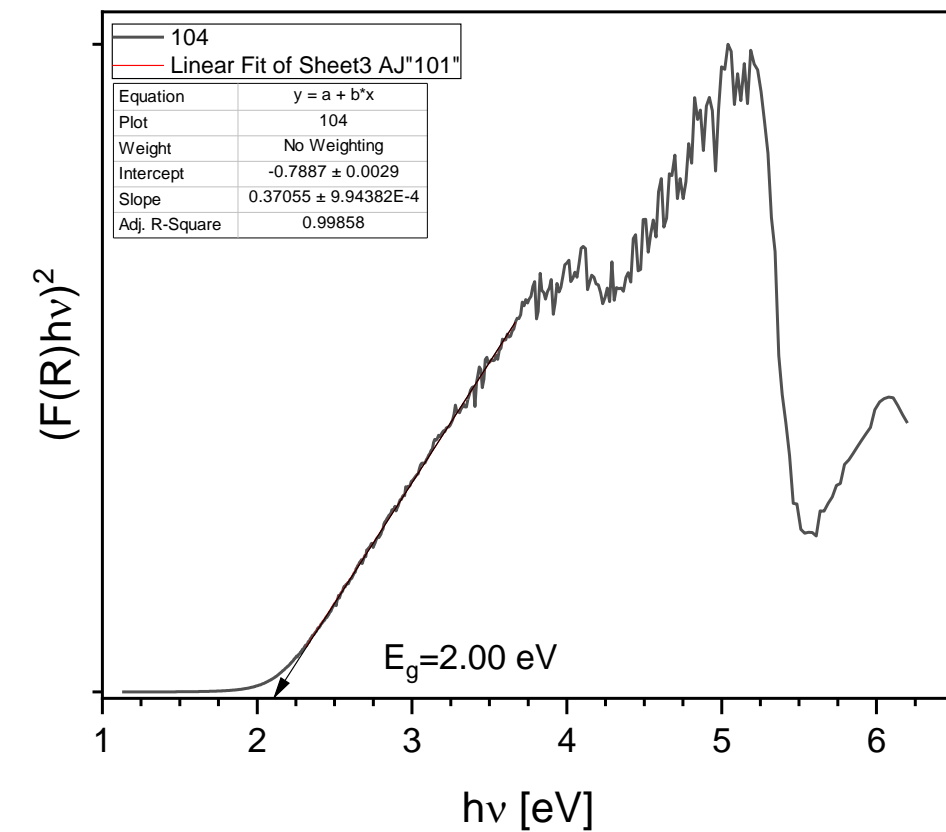
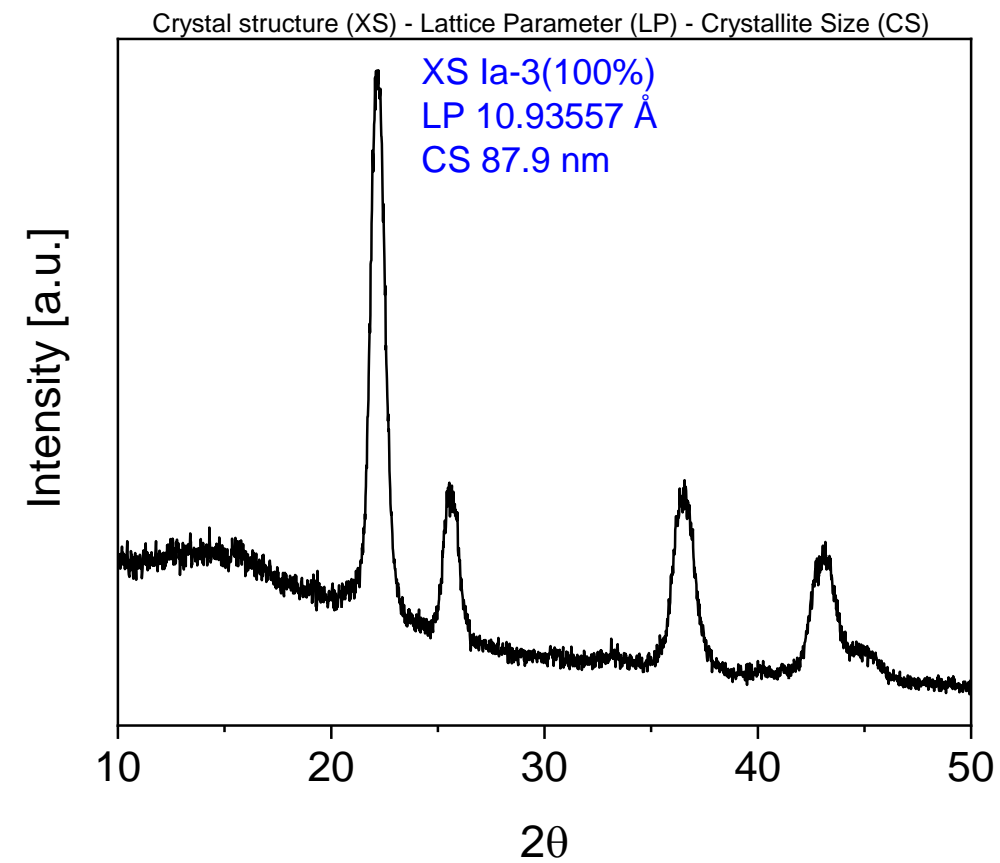
# Sample 104



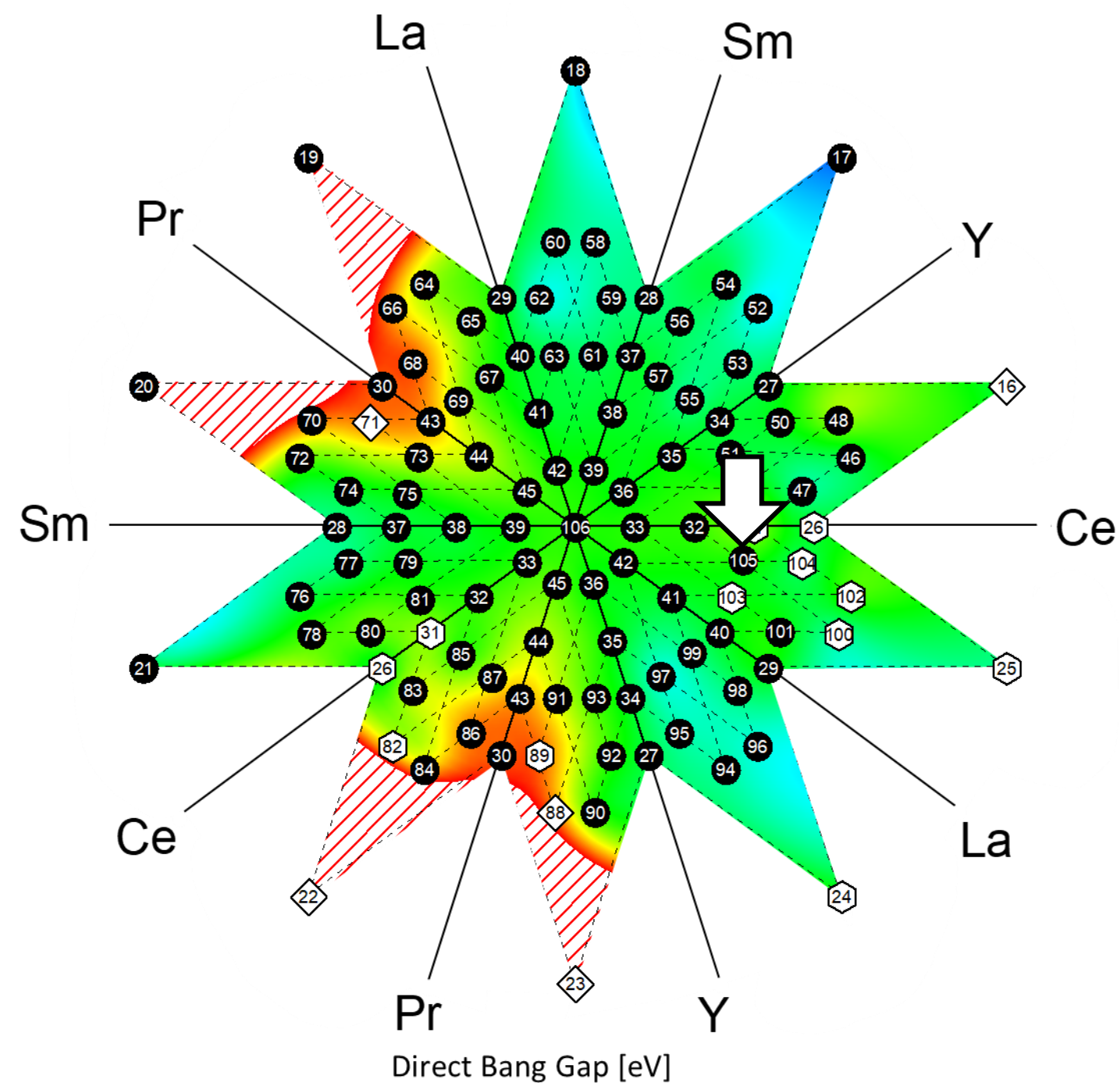
◊ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◇ Multiple Phase



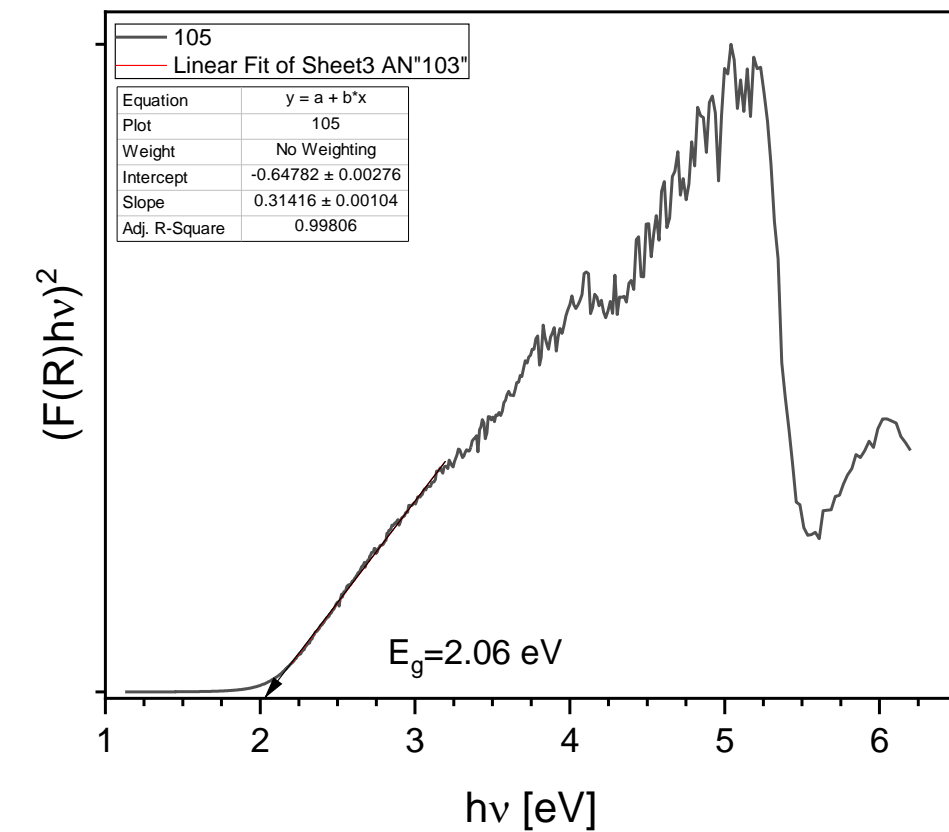
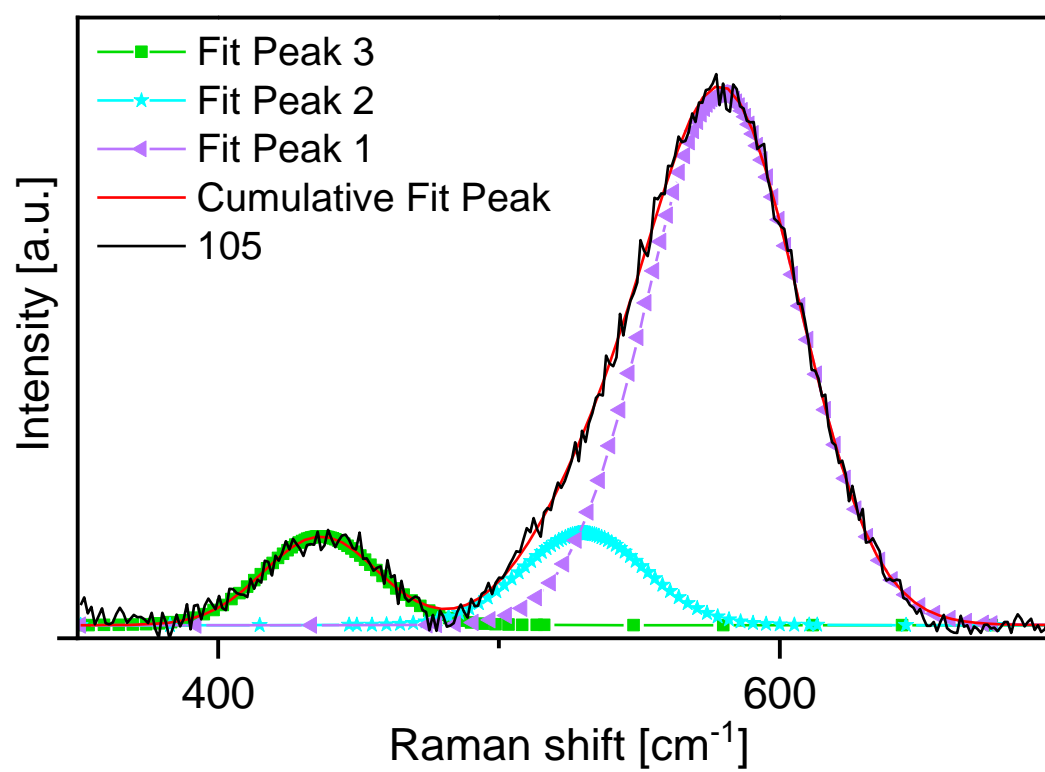
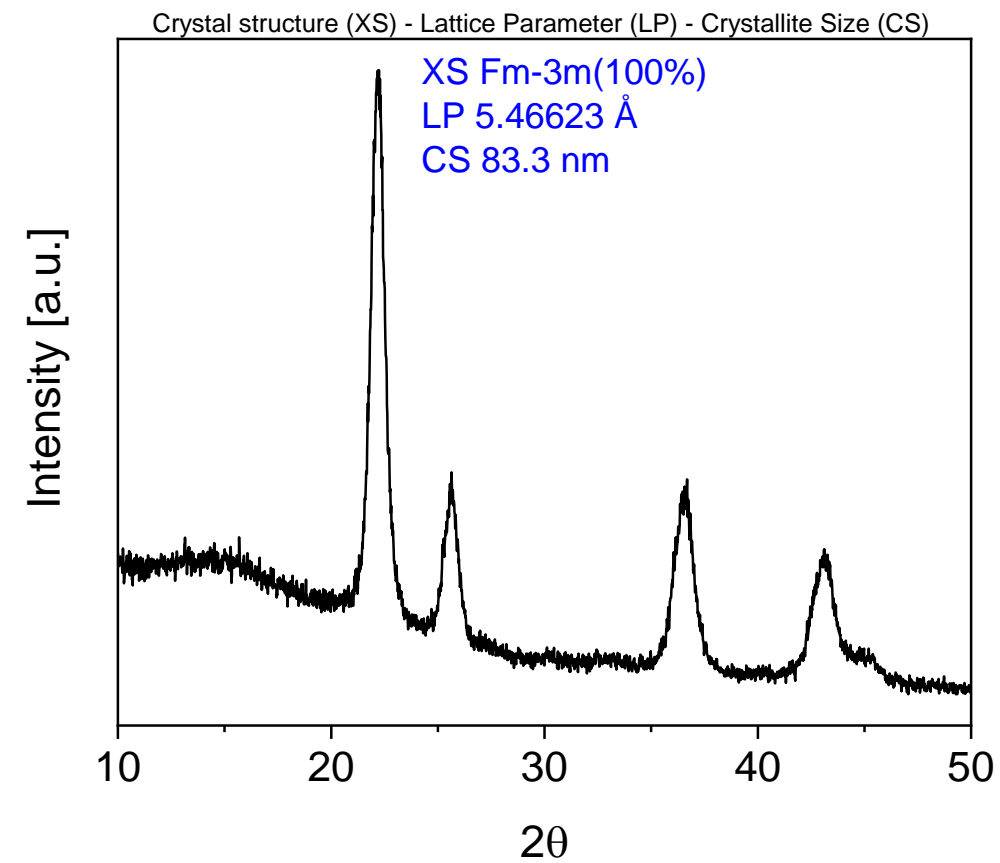
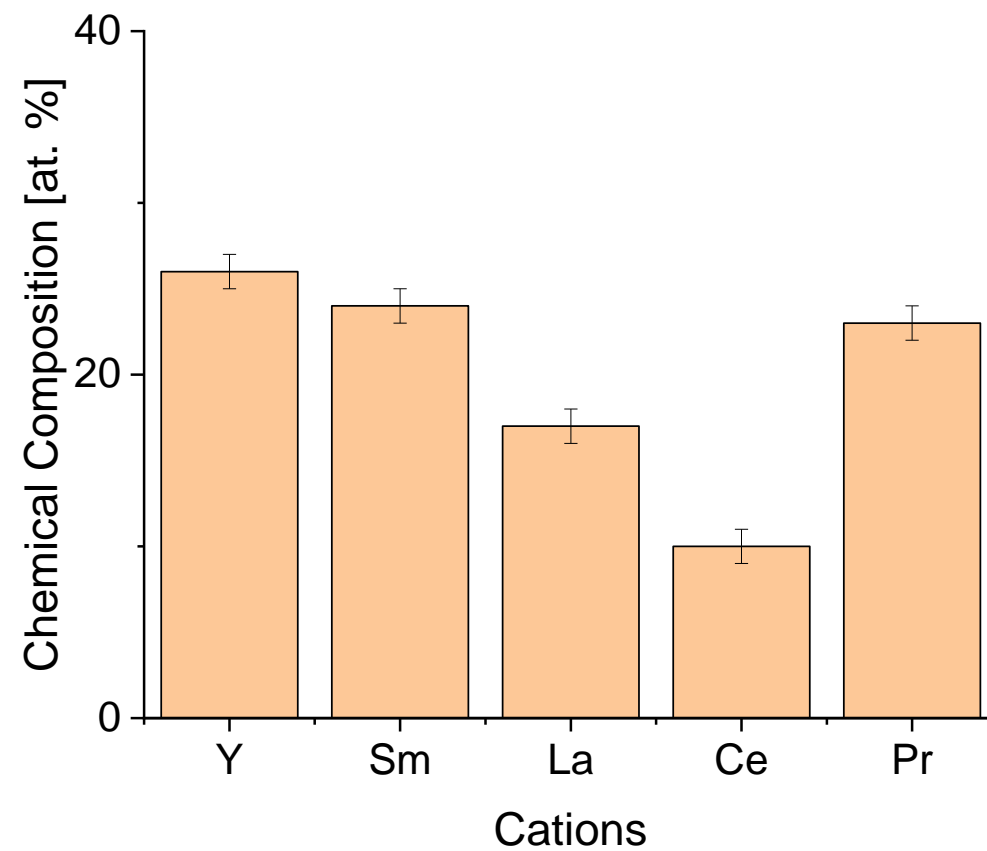
N.A.



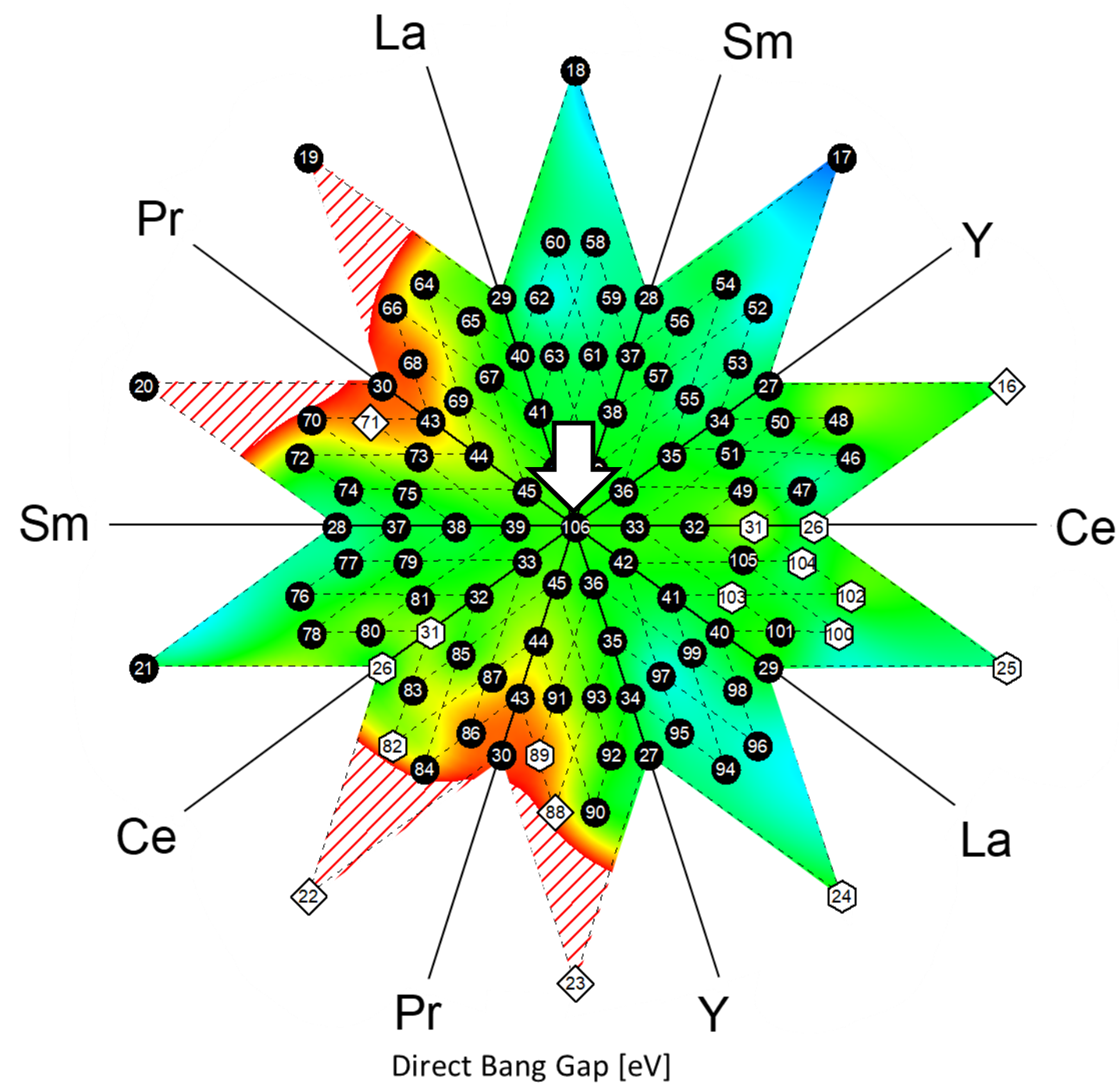
# Sample 105



◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase



# Sample 106



◻ Single Phase  $Ia\bar{3}$  ● Single Phase  $Fm\bar{3}m$  ◊ Multiple Phase

