

## Supporting Information

# Solution-Based Synthesis of Sulfanite $\text{Cu}_3\text{TaS}_4$ and $\text{Cu}_3\text{TaSe}_4$ Nanocrystals

Mimi Liu, Cheng-Yu Lai, Chen-Yu Chang and Daniela R. Radu \*

Department of Mechanical and Materials Engineering, Florida International University, Miami, 33199 FL, USA

\* Correspondence: dradu@fiu.edu

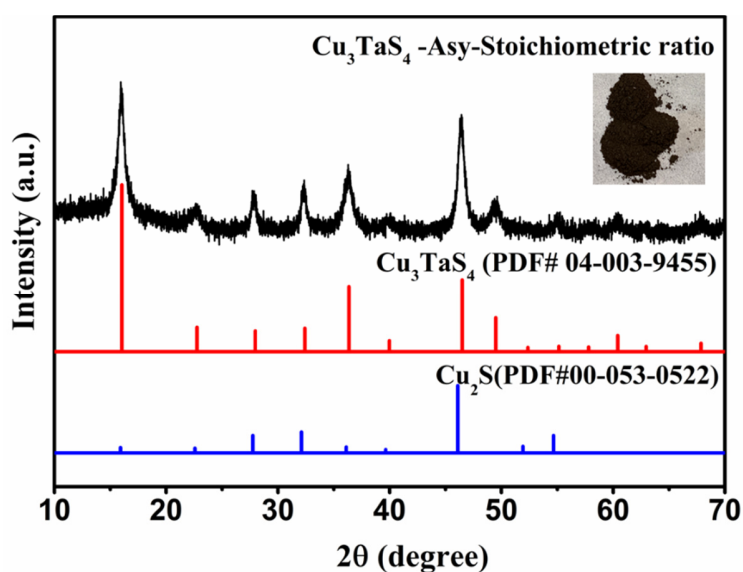


Figure S1 XRD of  $\text{Cu}_3\text{TaS}_4$  synthesized using stoichiometric ratio (Asy=As Synthesized)

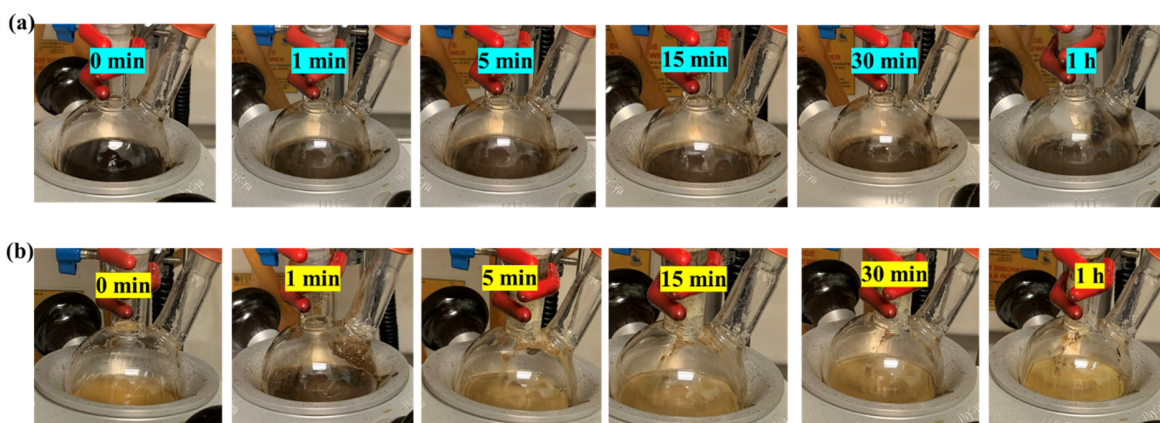


Figure S2 Color changes for the cascade synthesis (a) and hot-injection synthesis (b) of  $\text{Cu}_3\text{TaS}_4$  NCs.

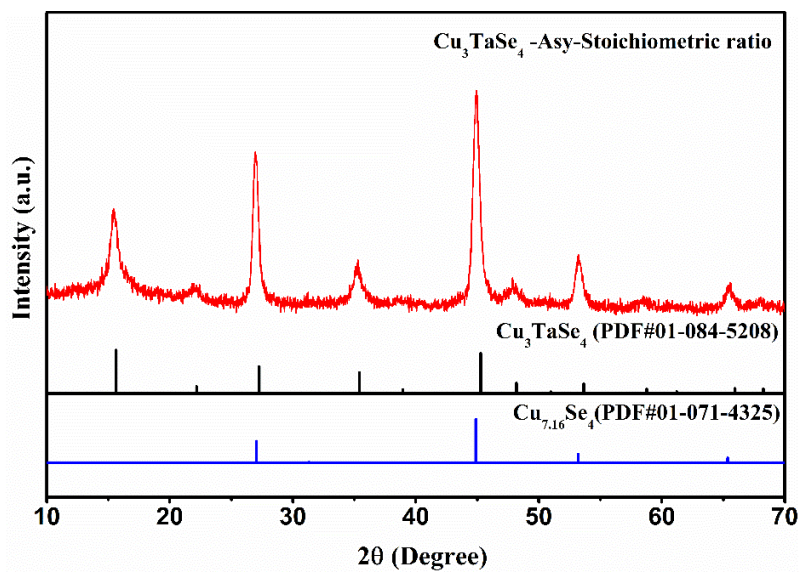


Figure S3 XRD of  $\text{Cu}_3\text{TaSe}_4$  synthesized using stoichiometric ratio.

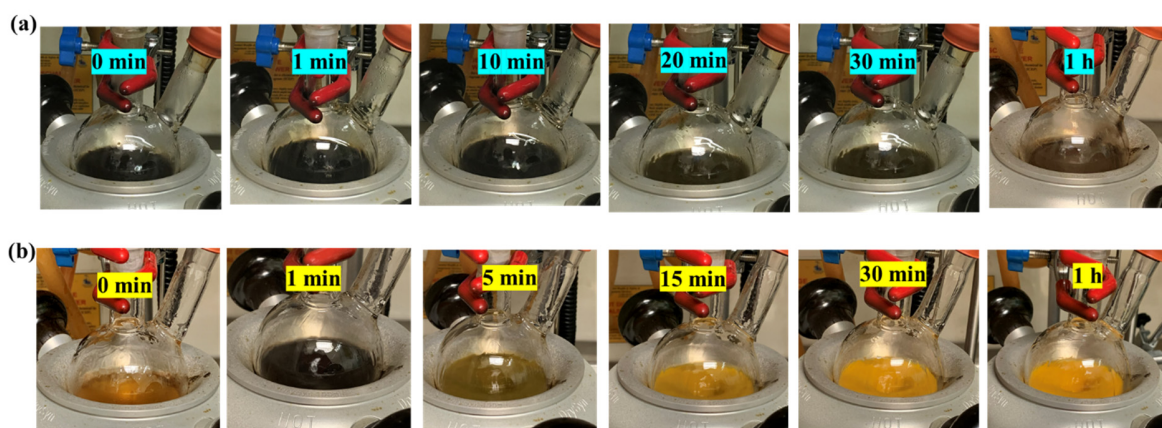


Figure S4 Color changes for the cascade synthesis (a) and hot-injection synthesis (b) of  $\text{Cu}_3\text{TaSe}_4$  NCs.

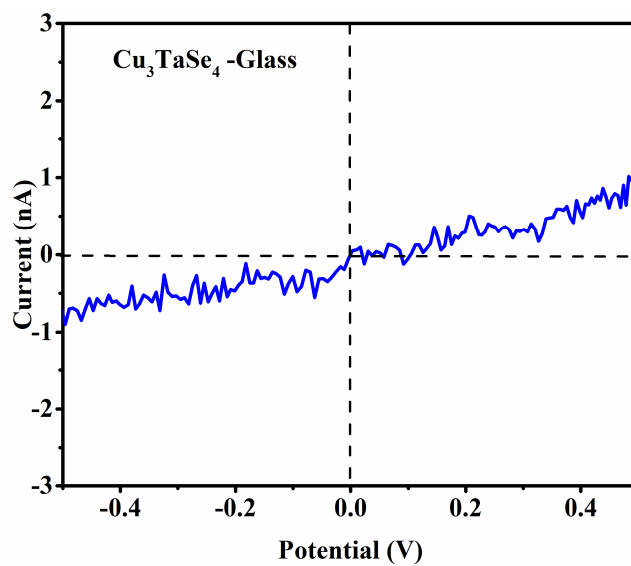


Figure S3 I-V curve of the Au/ $\text{Cu}_3\text{TaSe}_4$  NCs-glass/Au device.