

Synthesis of photo-responsive Indium Selenides (InSe and In₂Se₃) from tris(4,6-dimethyl-2-pyrimidylselenolato)indium(III) as molecular precursor

Gourab Karmakar,^{a,b#} Alpa Y. Shah,^{a#} Adish Tyagi,^{*a,b} A. P. Wadawale,^a G. Kedarnath,^{*a,b} N. Naveen Kumar,^c Jitendra Bahadur^d

^aChemistry Division, Bhabha Atomic Research Centre, Mumbai- 400 085 (India),

^bHomi Bhabha National Institute, Anushaktinagar, Mumbai- 400 094 (India)

^cMaterials Science Division, Bhabha Atomic Research Centre, Mumbai- 400 085 (India).

^dSolid State Physics Division, Bhabha Atomic Research Centre, Mumbai- 400 085 (India).

Email: tyagia@barc.gov.in, kedar@barc.gov.in

[#]Authors contributed equally

Figure captions

Figure S1. UV-vis spectra of In[Sepym(Me-4,6)₂]₃ (**1**)

Figure S2. ⁷⁷Se{¹H} spectra of In[Sepym(Me-4,6)₂]₃ (**1**)

Figure S3. EDS spectra of cubic InSe nanostructures synthesized in (a) OAm, (b) DDT and hexagonal In₂Se₃ nanostructures synthesized in (c) ODE and (d) furnace respectively.

Figure S4. SAED patterns of cubic InSe nanostructures synthesized in (a) OAm, (b) DDT and hexagonal In₂Se₃ nanostructures synthesized in (c) ODE and (d) furnace respectively.

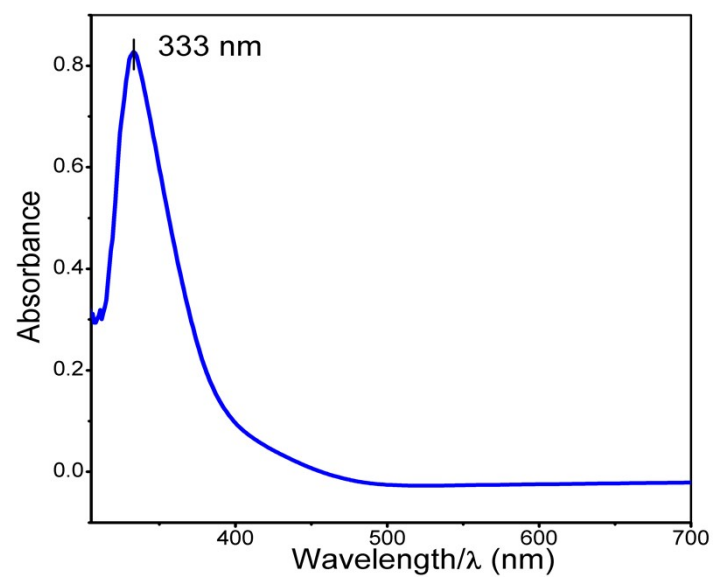


Figure S1. UV-vis spectra of $\text{In}[\text{Sepym}(\text{Me-4,6})_2]_3$ (**1**)

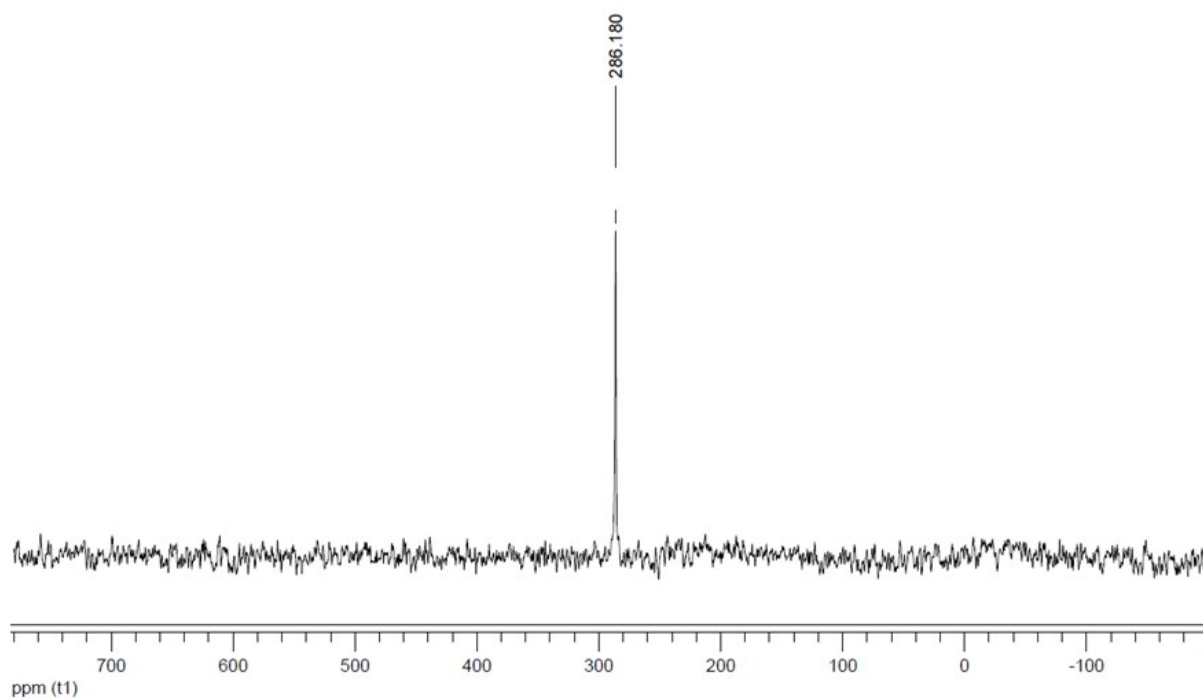


Figure S2. $^{77}\text{Se}\{^1\text{H}\}$ spectra of $\text{In}[\text{Sepym}(\text{Me-4,6})_2]_3$ (**1**)

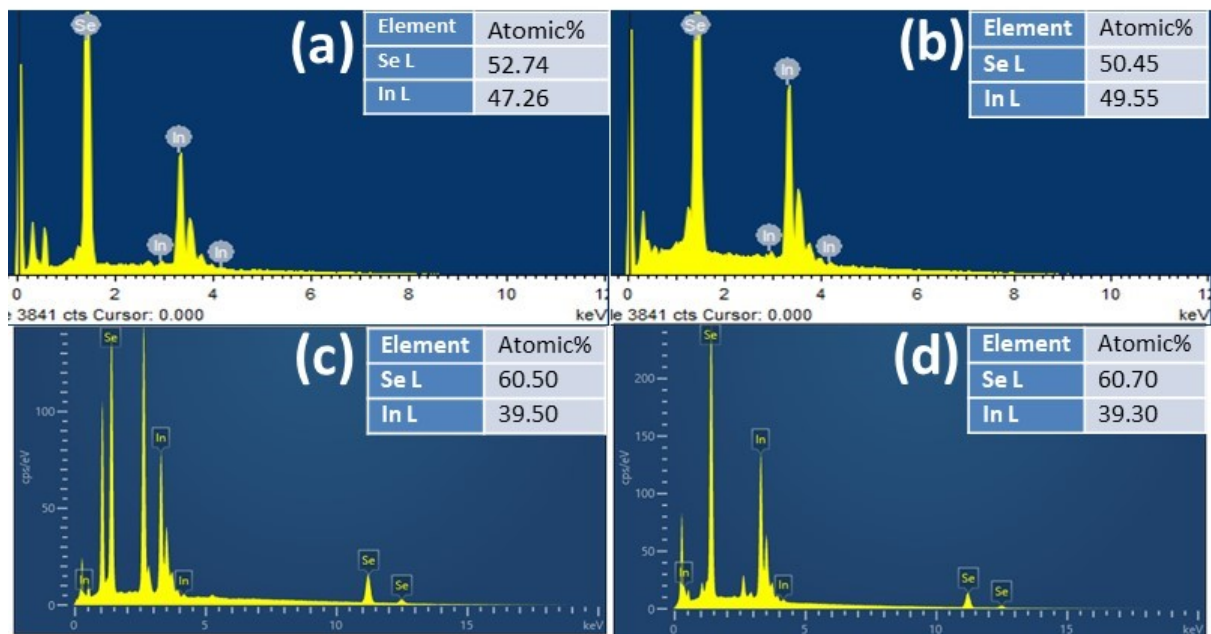


Figure S3. EDS spectra of cubic InSe nanostructures synthesized in (a) OAm, (b) DDT and hexagonal In_2Se_3 nanostructures synthesized in (c) ODE and (d) furnace respectively.

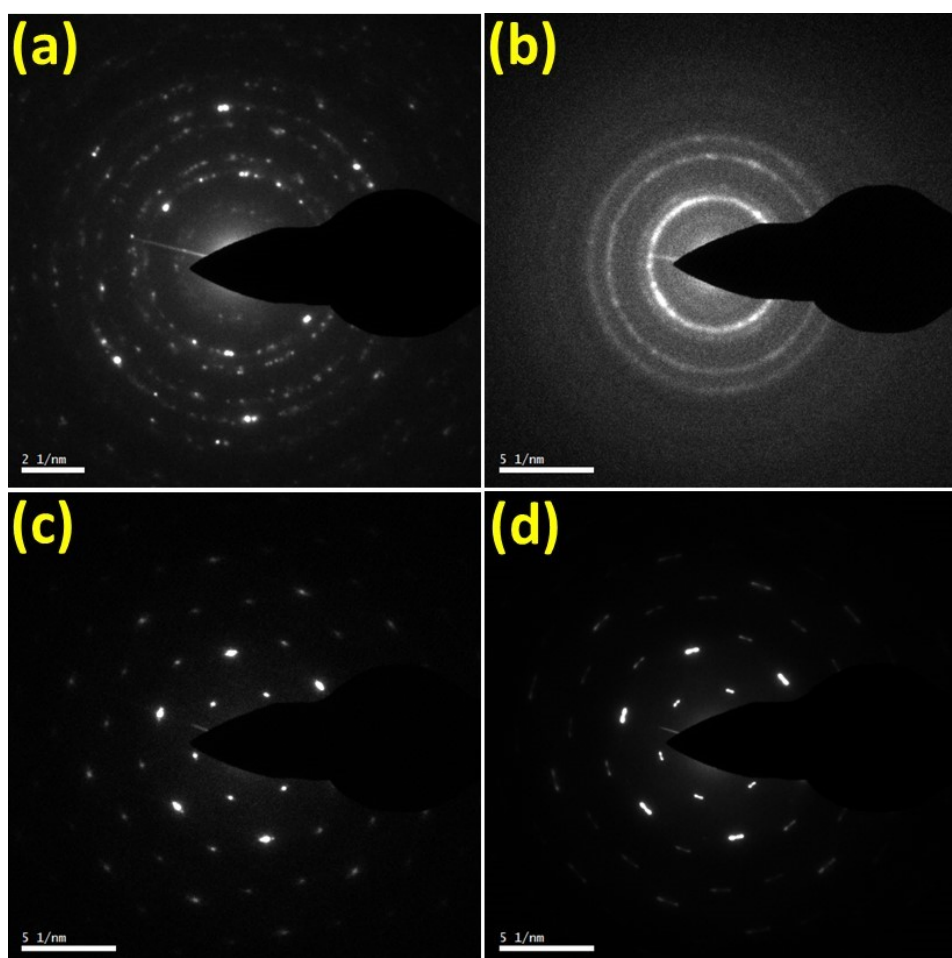


Figure S4. SAED patterns of cubic InSe nanostructures synthesized in (a) OAm, (b) DDT and hexagonal In₂Se₃ nanostructures synthesized in (c) ODE and (d) furnace respectively.