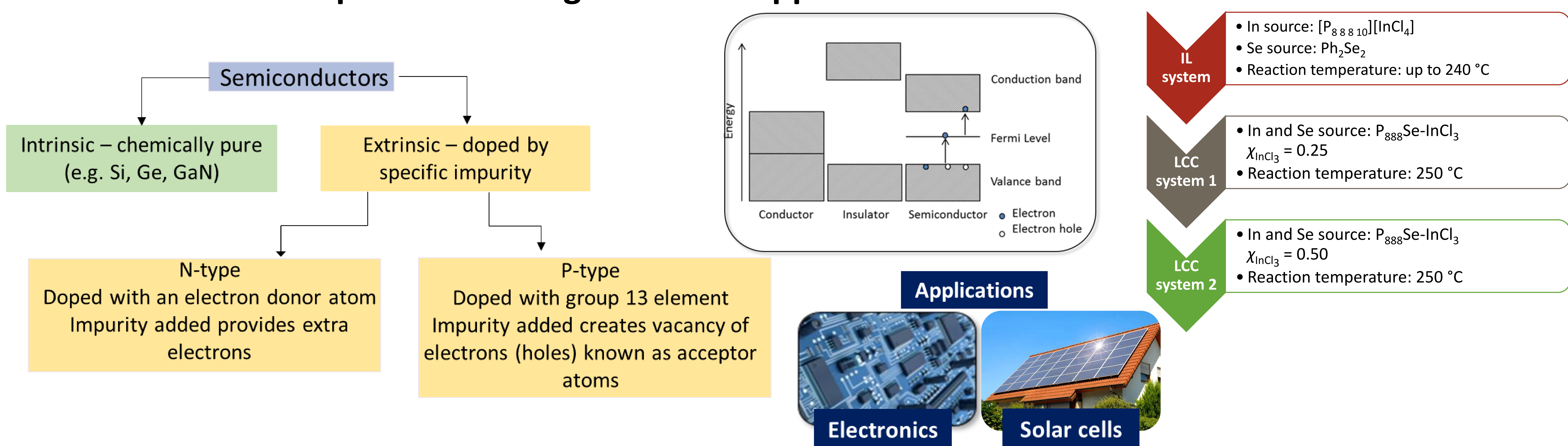




Liquid coordination complexes (LCCs) for the synthesis of semiconductor nanoparticles

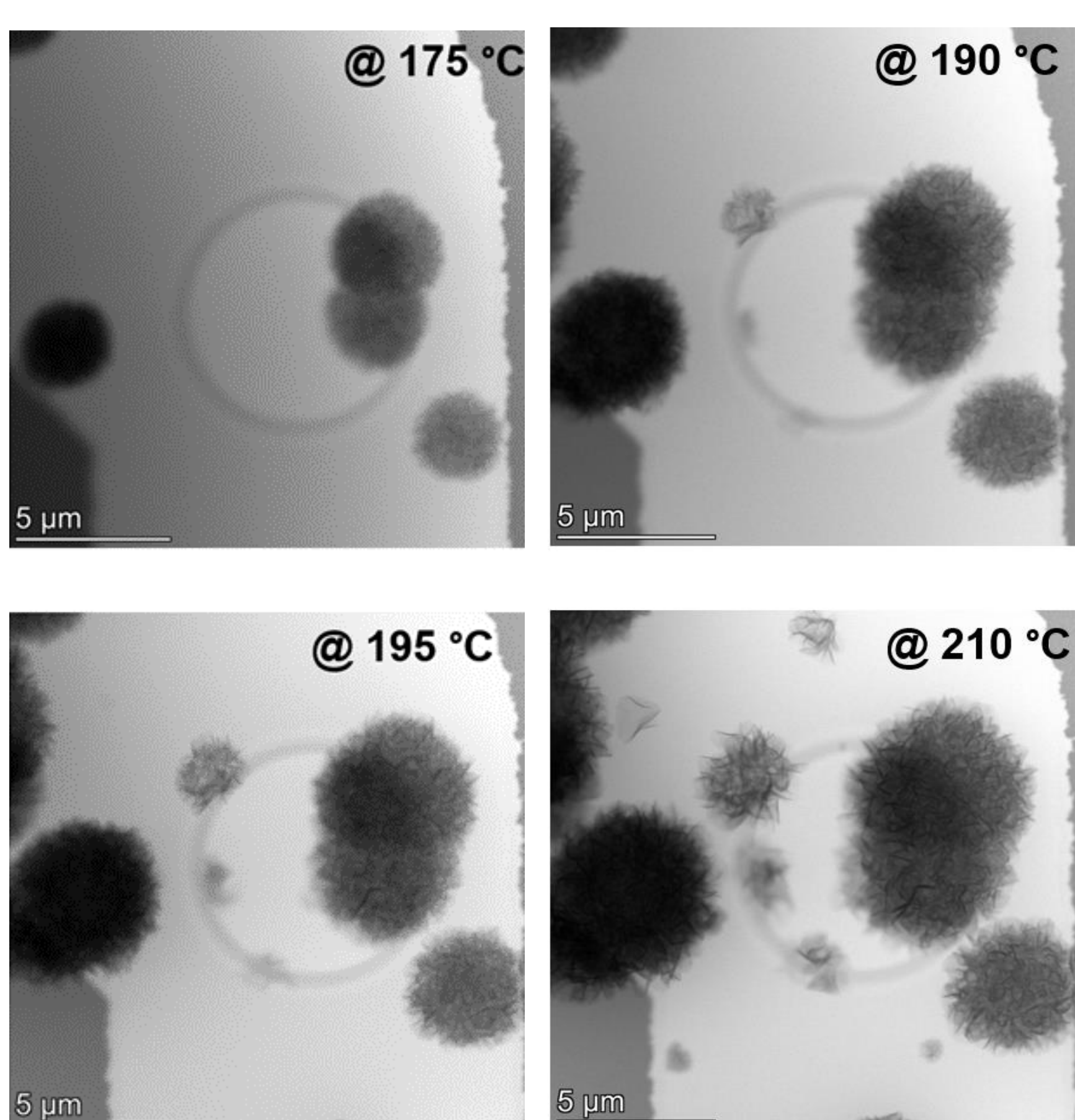
Beth Murray, John Scott, Nicholas Stephen, Miryam Arredondo and Małgorzata Swadźba-Kwaśny

Semiconductor nanoparticles: Background and applications



In operando TEM synthesis of indium(III) selenide nanoparticles from LCCs

In_2Se_3 nanoparticles



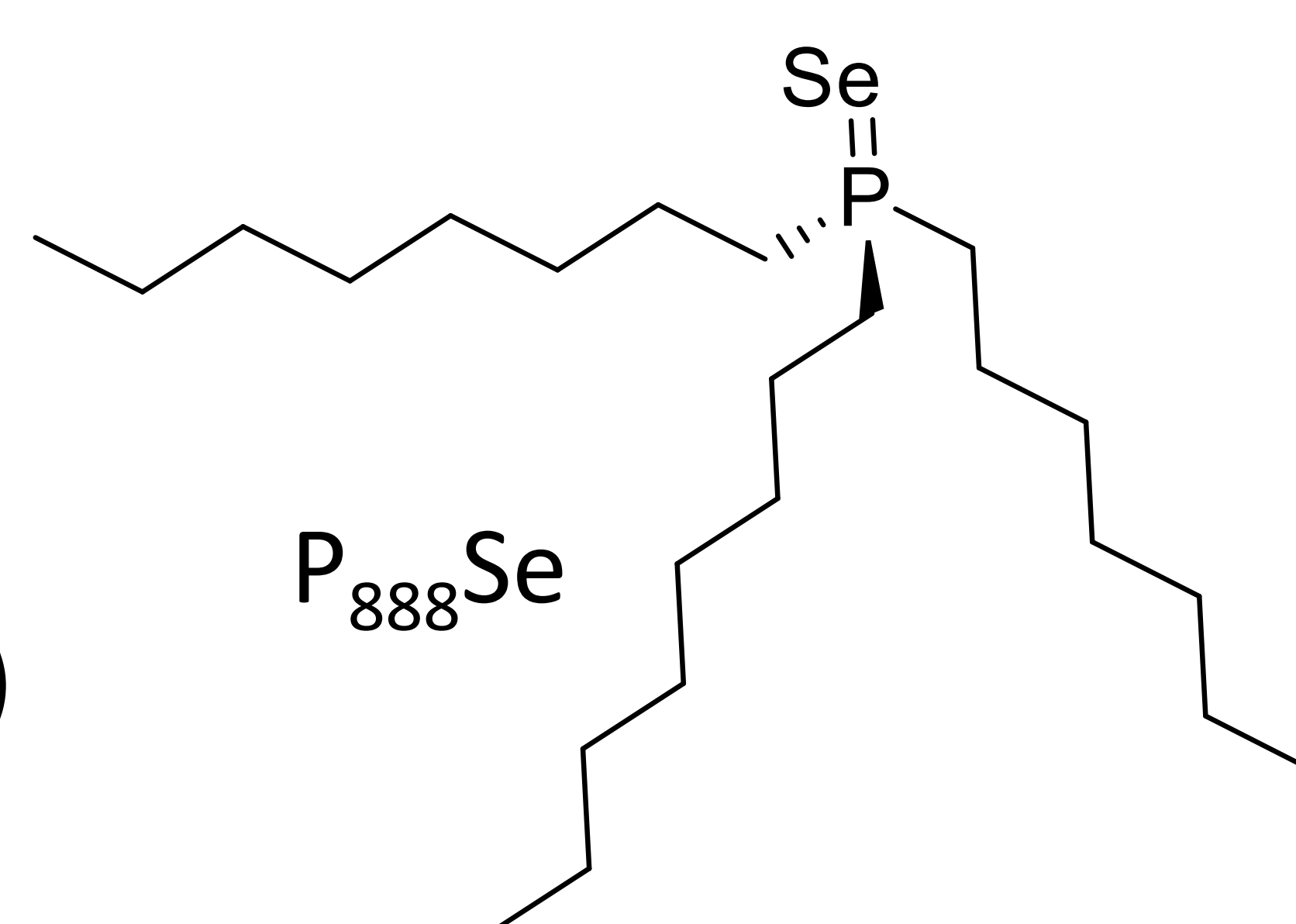
TEM – ‘transmission electron microscopy’

LCC: $P_{88}Se-InCl_3$ ($\chi_{InCl_3} = 0.50$)

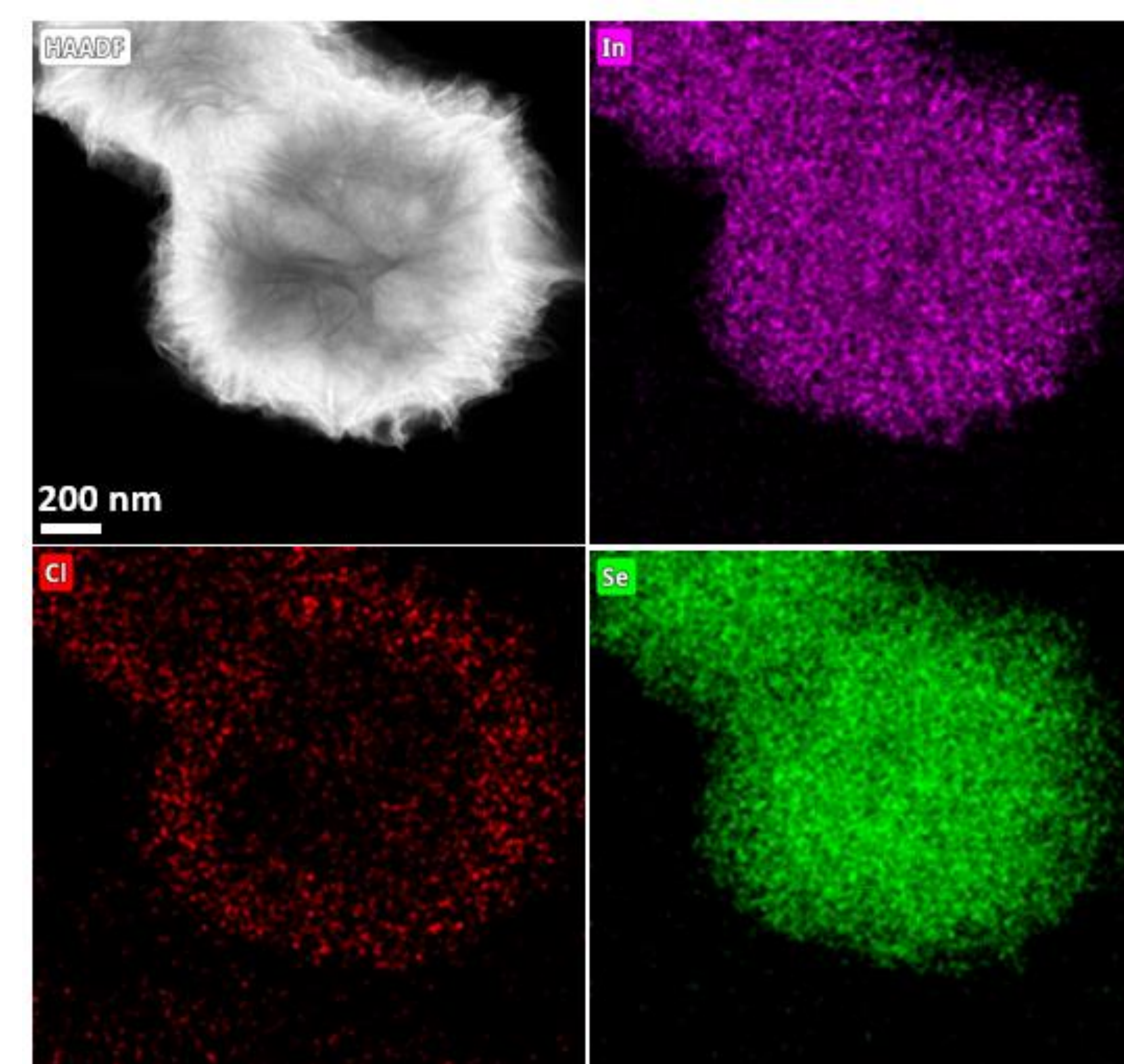
Ramped heating 2 °C/s

In_2Se_3 : N-type III-IV semiconductor

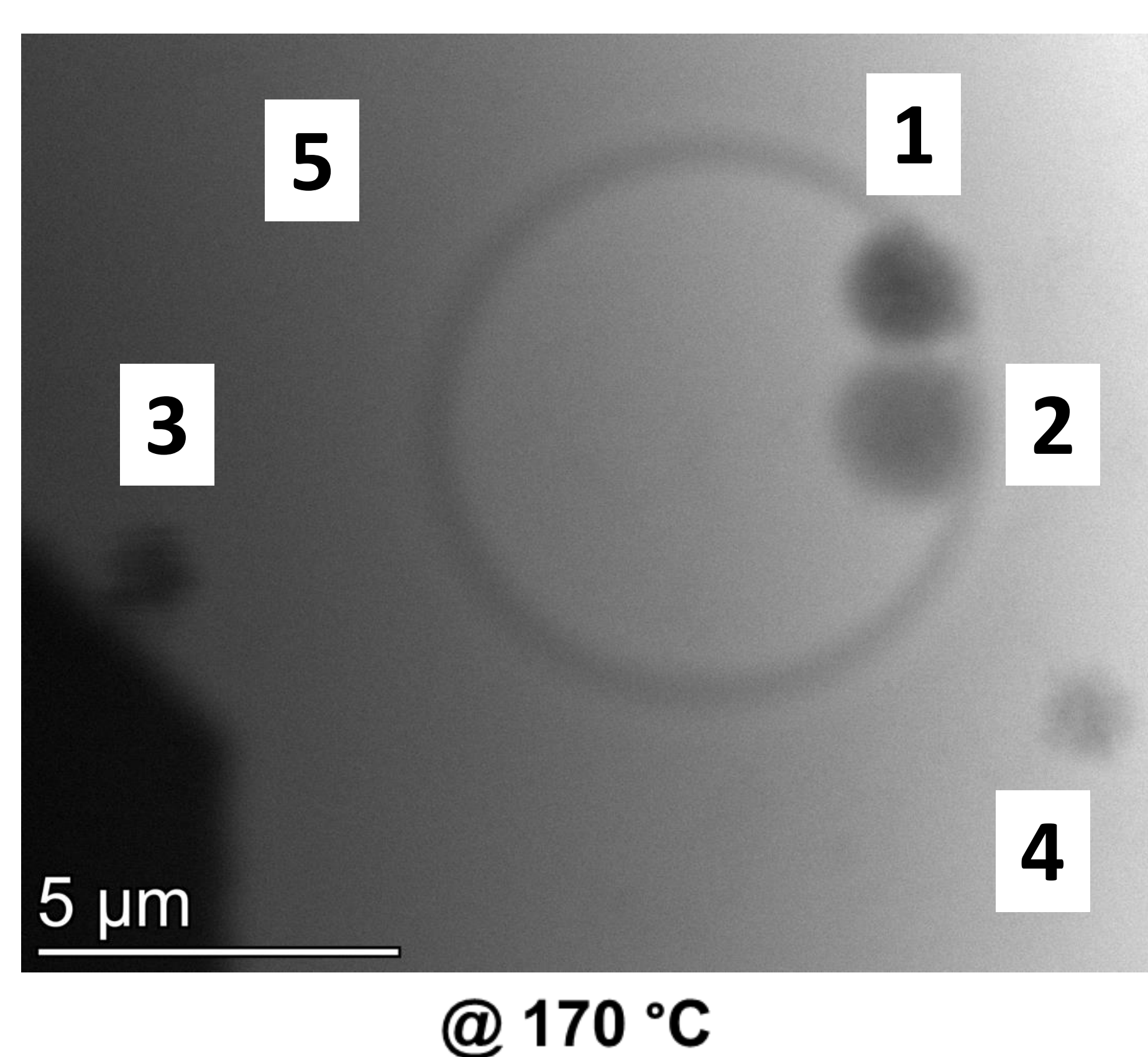
‘Dandelion’ morphology



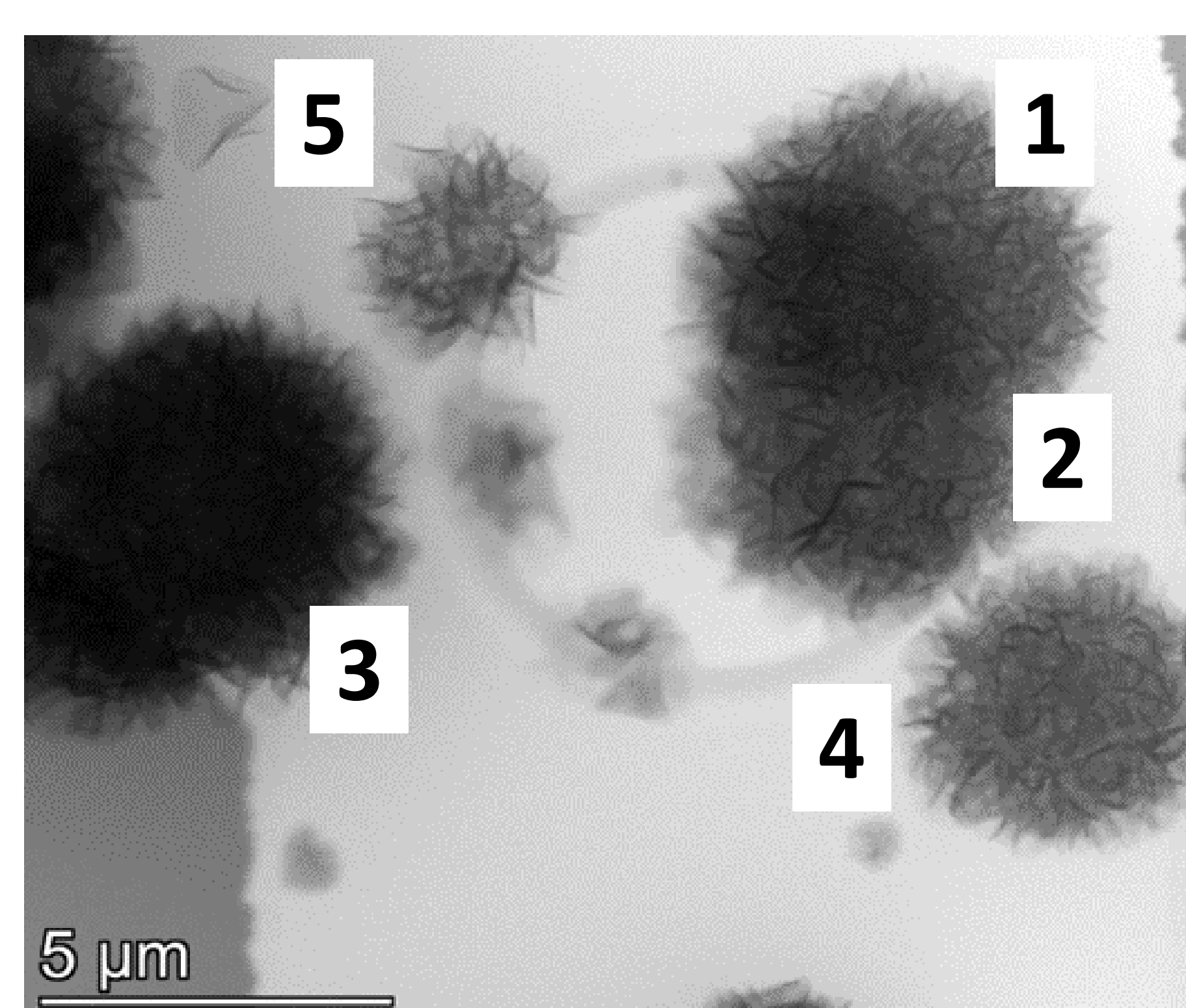
EDX analysis confirms dandelion structures are primarily comprised of **indium** and **selenium**



Kinetic study: Growth of nanoparticles as a function of temperature



@ 170 °C



@ 210 °C

