

Supporting Information

**The Impact of Erbium Incorporation on the Structure and
Photophysics of Silicon-Germanium Nanowires**

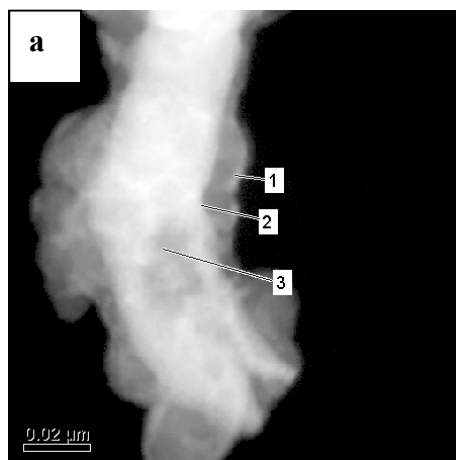
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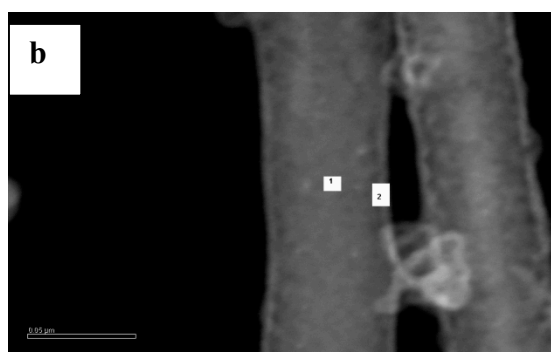
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Supporting Figure 1. Quantitative elemental analyses of the NWs. a) “Sandwich” structure Er-doped SiGe NW; and b) “Er-surface Enriched” SiGe NW.

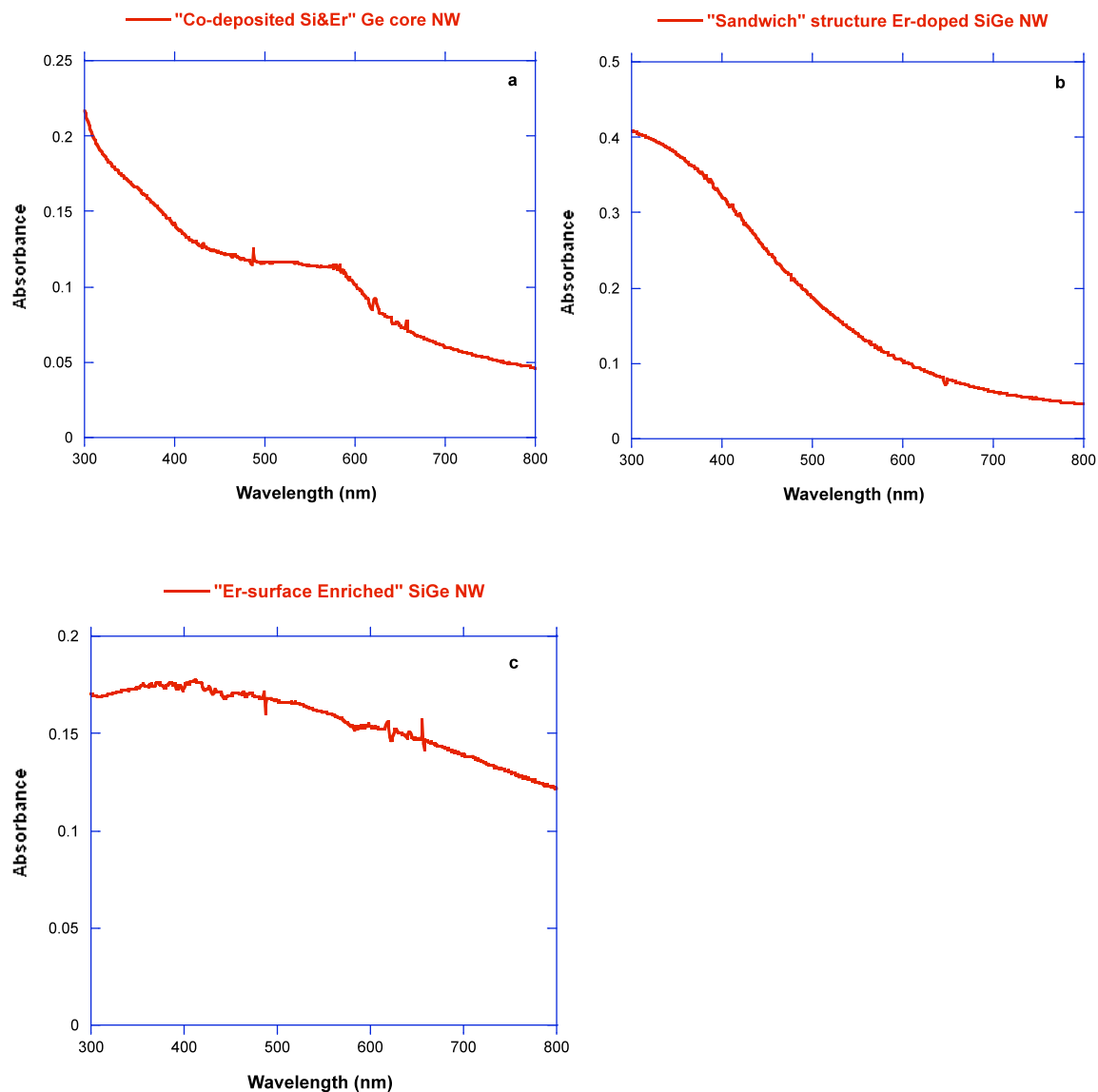
Supporting Figure 2. Room-temperature visible absorption spectrum of a) “Co-deposited Si&Er” Ge core NW; b) “Sandwich” structure Er-doped SiGe NW; and c) “Er-surface Enriched” SiGe NW. All NWs were annealed at 600 °C in N₂ and dispersed in ethylene glycol solution by sonication.



Label	at% Si	at% Ge	at% Er
Point 1	50.3	43.0	6.7
Point 2	21.0	76.4	2.6
Point 3	91.7	8.3	0



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Supporting Figure 2. Room-temperature visible absorption spectrum of a) “Co-deposited Si&Er” Ge core NW; b) “Sandwich” structure Er-doped SiGe NW; and c) “Er-surface Enriched” SiGe NW. All NWs were annealed at 600 °C in N₂ and dispersed in ethylene glycol solution by sonication.