

Supporting Information for the paper

Lattice dynamics and carrier recombination in GaAs/GaAsBi nanowires

M. Jansson¹, V.V. Nosenko¹, G.Yu. Rudko¹, F. Ishikawa², W.M. Chen¹, and I.A. Buyanova¹

¹*Department of Physics, Chemistry and Biology, Linköping University, 58183 Linköping, Sweden*

²*Research Center for Integrated Quantum Electronics, Hokkaido University, Sapporo 060-8628, Japan*

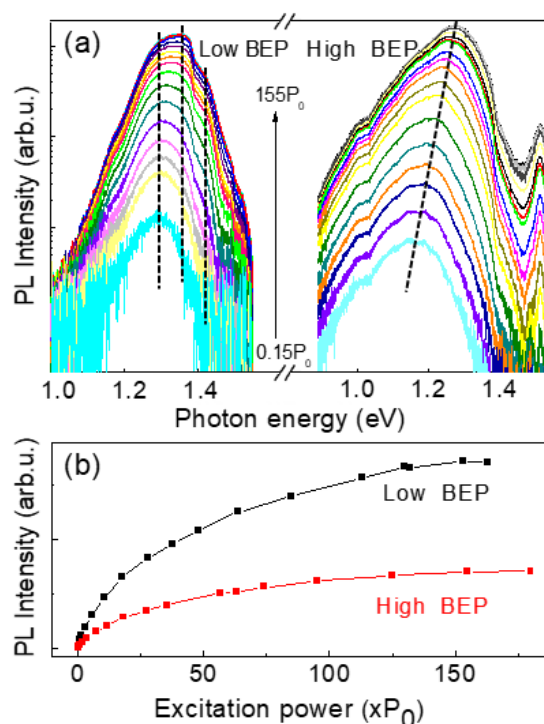


Figure S1. (a) Evolution of the PL spectra measured at 4 K from the low-BEP and high-BEP NWs with increasing excitation power density (P). The measurements were performed using a frequency-doubled pulsed Ti:sapphire laser at 770 nm with a pulse width of 2 ps. (b) The PL intensity of the low-BEP and high-BEP NWs as a function of the excitation power. Here $P_0 = 0.39 \mu\text{J}/\text{cm}^2/\text{pulse}$.

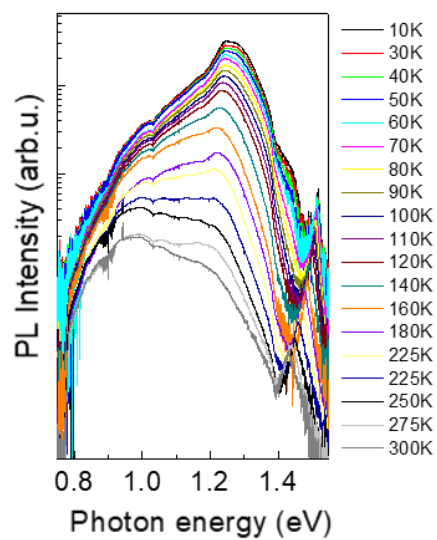


Figure S2. Temperature dependence of the PL spectra measured from the GaAs/GaAsBi/GaAs core/shell/shell NWs under the excitation photon power of $350 \text{ nW}/\mu\text{m}^2$.