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Mechanical Strength of Composite Nanowires HOWARD HORTON, BRET HESS, Brigham Young University — Motivated by the recent creation of carbon nanotubes coated in silicon, we investigate the mechanical properties of carbon nanotubes embedded in silicon nanowires using empirical force models and molecular dynamics. We predict the Young's modulus and shear modulus for these composite nanowires. We also discuss the mechanical strength and ability to withstand severe deformation.

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