

Isolating and Probing Double-Walled Carbon Nanotubes

Zuzana Kominkova, Vaclav Vales, Martin Kalbac, and Mark C. **Hersam**

International Collaboration:

Northwestern University Materials Research Science and Engineering Center
and J. Heyrovsky Institute of Physical Chemistry, Czech Republic

Double-walled carbon nanotubes (DWCNTs) can be viewed as nanoscale coaxial conductors with potential utility as sensors, nanoelectronic wiring, and optoelectronic devices. However, the synthetic methods for producing DWCNTs also yield single-walled carbon nanotubes (SWCNTs), necessitating the development of separation methods. In an international collaboration with the J. Heyrovsky Institute of Physical Chemistry in the Czech Republic, the Northwestern University Materials Research Science and Engineering Center has utilized density gradient ultracentrifugation to separate DWCNTs from SWCNTs, thus allowing their utilization for fundamental studies and application development.

