

Separation of Carbon Nanotubes through Host-Guest Chemistry

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Carbon-based nanomaterials have been attracting enormous interest due to a wide variety of (potential) applications. Their sophisticated applications mostly require homogeneous properties based on the structural homogeneity. We have applied host-guest chemistry to discriminate the structures of carbon nanotubes (CNTs) such as handedness and diameter as well as the properties such as metallicity (1). The host molecules designated as "nanotweezers"(1), "nanocalipers"(2), and "nanocages"(3) have been designed, synthesized and applied to CNT separation.

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