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Flattened and Coaxial Cable-liked Carbon Nanotubes WENZHI LI, Florida International University, Miami, FL 33199, ZHIFENG REN, KRIS KEMPA, Boston College, Chestnut Hill, MA 02467 — Flattened carbon nanotubes have been occasionally observed in carbon nanotube samples. It was postulated that the flattening of carbon nanotubes was accidentally formed by external mechanical force. In this report, we show batch pure flattened carbon nanotubes synthesized by chemical vapor deposition. Each nanotube is caped at one end with a cylindrical cobalt catalyst particle, which contrasts to the spherically shaped catalyst particles usually found at the tips of carbon nanotubes. The flattened nanotubes may provide the opportunity to investigate how the structure deformation of the nanotubes affects their electronic properties. Another new form of carbon nanotubes, coaxial cable-liked structure, in which a bundle of single-wall carbon nanotubes is wrapped by a multi-wall nanotube, will be presented. The above new structures of carbon nanotubes may shed some light on the understanding of the growth mechanism of carbon nanotubes.

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