Supplementary information

**Synthesis of sulfur-doped carbon nanotubes from sulfur powder using chemical vapor deposition**

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**Fig. S1** The XRD analysis of the employed catalyst (Fe3O4/CaCO3)



**Fig S2** The FESEM images of the employed catalyst (Fe3O4/CaCO3)



**Fig. S3** A view of the two temperature zone furnace (CVD) used for synthesis of SCNT.

**More details concerning utilized techniques:**

**FESEM, elemental mapping and EDS:**

Instrument: Mira 3-XMU FE-SEM

Company: Tescan Co, Brno, Czech Republic

Operating Voltage: 15 kV

Detectors: BSE (Back-scattered electron), In-Beam BSE and In-Beam secondary electron detector

Max resolution: 7.0×106

**TEM:**

Instrument: EM208S TEM micro-scope

Company: Philips Co, The Netherland

Operating Voltage: 120.0 kV

Resolution: 2 nm

Imaging modes: BF (bright field) and diffraction

**XRD:**

Instrument: XPERT

Company: Philips Co, The Netherland

Operating Voltage: 40 kV

Current: 30 mA

Radiation sources: Line Kα of Cu

**XPS:**

Instrument: Specs model EA10 plus

Company: Bestec Co, Germany

Operating Voltage: 15 kV

Radiation sources: Line Kα of Al

Detecting elements: All except H and He

**Raman spectroscopy:**

Instrument: Senterra

Company: Bruker Co, USA

Laser excitation: 514 nm

Operating Voltage: 15 kV

Detectors: CCD, point to point analysis

Sample: Powder and solid films