

## **Nanoscale materials by gas-phase FCCVD synthesis: structure and properties**

*Wednesday 21 June 2023 09:00 (40 minutes)*

Floating catalyst CVD is the universal route to grow 1D nanoparticles, such as nanotubes and nanowires, in the gas phase and collect them in the form of freestanding nanotextiles, non-woven mats, and fibres. Due to high aspect ratio of constituent nanoparticles and network structure, macromaterials of CNTs exhibit high mechanical and electrical properties coupled with high flexibility and inherent damage-tolerance. The talk will give an overview on the structure and properties of CNT-based materials and recent achievements of IMDEA Materials on synthesis of nanotextiles of different chemistries.

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