

# An Introduction to the Nanotechnology of Gold

15 December 2012 ( Saturday) | 3pm to 4pm | Training Room , NCL Innovation park

Age group of target audience : **12-16 year olds**

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## Key features of this lecture:

- Brief introduction to nanotechnology
- Discussion of scale and how important physical and chemical properties of matter change as the size of an object is decreased down to the nanoscopic range.
- How gold, a material that traditionally has little practical or industrial importance, of all metals plays a dominant role in modern nanotechnology.
- Impressive experiments to illustrate the ease of gold nanoparticle preparation to showcase some of their optical properties.
- Followed by some old, current and future applications ranging from church glass windows to DNA analysis and treatment of cancer.

## About the Speaker : Mathias Brust

### Special Recognition:

Received a prestigious Advanced Grant from the European Research Council (ERC) to develop a five year research programme on active nanoscale devices that, like living organisms, operate far away from chemical equilibrium

### Where and what did he study:

- Obtained his first degree in Chemistry from Hamburg University.
- Received his PHD degree in 1995 under the supervision of Prof. David J. Schiffrin.
- Postdoctoral research in nanoscale electrochemistry, first at the University of Buenos Aires (Argentina) Following at the University of Texas at Austin (USA), where he worked in the well-known electrochemistry group of Prof. Allen J. Bard.
- EPSRC Advanced Research Fellow and Lecturer from 1998.
- Promoted to Reader in 2004 and to a personal Chair (full Professor) in 2006.

