

# Mission Invisible: BITS Goa works on anti-radar project for DRDO

Gauree.Malkarnekar  
@timesgroup.com

**Panaji:** In defense, the use of radar absorbing materials (RAMs), which are capable of absorbing microwave radiation in the X-band region, is required to hide an aircraft or warship by reducing its radar cross section (RAS).

The research for all this could be happening in the relatively serene campus of BITS Pilani KK Birla Goa campus at Zuarinagar.

The nano materials lab of the department of chemistry at the Goa campus began its re-



Narendra Nath Ghosh and his current PhD students

search activity in 2006-07. But its very first research project came from the Defense Research Development Organisation (DRDO). A key project being handled by the nano materials lab for DRDO involves developing strategic defense

material like RAM, which can be used in military vehicles, including aircrafts. The lab has been working on strategic defense materials over the last nine to 10 years, with extramural research funding from DRDO.

"The research activity started in 2006-07 with a project funded by DRDO. Under this project, we have developed a synthetic strategy to prepare a variety of iron oxide-based nanoparticles in water medium. It was demonstrated that by using this technique magnetic nanoparticles with tunable magnetic property can be prepared. We started the collaboration with De-

fense Lab Jodhpur to evaluate the magnetic properties of the materials, which we have synthesized at BITS Goa," said associate professor of department of chemistry, Narendra Nath Ghosh, who is the principal investigator for the research project. Such materials are useful in developing radar absorbing material for military vehicles.

"The major research activity at the nano materials lab involves developing methodologies for preparation of nanostructured materials and their applications. These methodologies are novel, but simple and cost-effective," said Dr Ghosh.