

Proposal Acronym	SupraNanoGels
Proposal Title:	Preparation of hybrid soft materials combining supramolecular anthraquinone-based gel systems and gold nanoparticles
Surname:	Maity
First name(s):	Debdeep
Research area:	Chemistry CHE
Sub-discipline of research area:	Supramolecular chemistry
Category of research:	basic
[REDACTED]	[REDACTED]
Abstract:	<p>Metal nanoparticles (NPs) have rapidly growing area during the last decades due to their surprising optical, electronic, magnetic and catalytic properties with vast potential in many applicative areas. Low molecular weight gelator molecules (LMWG) has drawn significant attention due to the ever-growing possibilities that a supramolecular approach can indeed open up. LMWGs can be profitable systems for achieving the assembly of objects belonging to different dimensional domains into functional NPs-gel materials. The aim of this project is to gain a molecular-level understanding of the interaction of NPs with the gelators within the gel matrix and to explore the correlation between the morphology of the chiral gel fibers and the surface plasmon mediated circular dichroism (SP-CD) responses of NPs. Furthermore, a comprehensive understanding of the mechanism of the twist formation and control the chiral twists in anthraquinone-based oxalamide gelator assemblies will be sought.</p>
Does this proposal possess any of the sensitive ethical issues detailed in ethical issues table?:	No