CALL FOR PROPOSALS
FOR
COST CHEMISTRY ACTION D35

From Molecules to Molecular Devices:
Control of Electronic, Photonic, Magnetic and Spintronic Behaviour

The new COST Action D35 was launched with the general objective: *To increase the knowledge and understanding of molecular electronic, photonic, magnetic and spintronic behaviour and to design new active chemical systems and processes that could find use in molecular devices*

Priority scientific topics to be addressed include

- Design, synthesis and characterization of new active molecules and their organization into functional assemblies and materials.
- Dynamic and directional control of electron and energy transfer
- Molecular electron conductivity and photoconductivity
- Molecular non-linear optics, electrooptics
- Molecular magnetism, photomagnetism, spintronics
- Interactions of functional molecules with nanoparticles, semiconductors, surfaces and conductive polymers
- Time- and space- resolved chemistry and laser control
- Quantum-chemical and molecular-mechanical modelling
- Development of prototype devices, e.g. for light energy conversion and storage, integrated optics, etc.

Other relevant scientific topics include photochromism, stimulus-induced molecular motion, energy dissipation in molecular systems, self-repair and self-healing of molecular systems, localized functionalization of surfaces, intermolecular communication, *etc*.

The Management Committee of the COST Action D35 seeks submissions of Working Group proposals for high-quality research collaborations.

Working Groups (WG) should be designed to carry out a collaborative research in areas relevant to the objectives and scientific priorities of D35. Ideally, the collaboration between WG members will lead to new scientific results by means of combining their complementary expertise and experimental or theoretical techniques and approaches, within shared scientific interests and goals. WG proposals must be submitted by partners from at least three different COST-member states but preferably at least five different members states (here a member state is defined as one of the 35 COST member states), which have signed (or will have signed at time of the start of the proposal) the Memorandum of Understanding (MoU). WGs should include one partner from any member state; in larger WGs two partners from the same member state can be accepted. WGs with more than ten partners are usually not efficient and will not be encouraged. All persons from universities, public sector or industries, who undertake research, are eligible to apply for participation in a COST Action. Proposals should be oriented towards fundamental or pre-competitive research. They will be peer-reviewed and subjected to the decision of the Management Committee. Proposals can be submitted anytime in the course of the first half of the D35 term, that is until the end of 2007. Early submissions are strongly encouraged. The procedure for submitting a WG proposal can be downloaded from the COST Chemistry web site at http://costchemistry.epfl.ch (under "Working Group Proposals" and under "Download forms" click on "COST Chemistry Working Group Proposal Form") or from the COST web site at http://cost.cordis.lu. The Technical Annexe of the D35 MoU, which states in detail the D35 objectives and scientific priorities, is also available from these COST web sites. WG proposals should be submitted to the D35 Chair (a.vlcek@qmul.ac.uk) and the COST Office Science Officer (dneibecker@cost.esf.org).

Rating Criteria of WG Proposals

- Scientific quality and novelty
- Relevance to the Objectives
- Benefits from collaboration, synergism
- Research performance, competence of the participants
- Feasibility

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