



Chemistry and Molecular Sciences and Technologies (CMST)

Participating countries

BE, BG, CH, CZ, DE, DK, ES, FI, FR, HR, HU, IE, IL, IT, MT, NL, PL, PT, RO, SI, TR, UK

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COST Action no. CM1005

Supramolecular Chemistry in Water

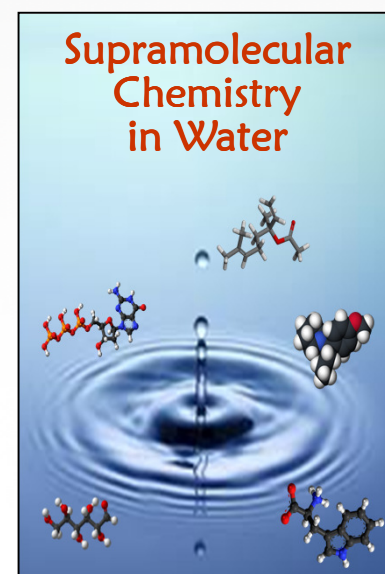
2011 | 2015

Objectives

- To develop supramolecular systems that function in water and that can monitor environmentally or biologically relevant species, control selectivity of reactions, or produce self-assembled organized structures.
- The 'de novo' design of receptors able to monitor biologically and environmentally relevant species in an aqueous environment with high selectivity and affinity.
- The control of supramolecular reactivity in water by biomimetically inspired systems.
- The design of scaffolds able to self-assemble to yield highly responsive functional materials.
- The sharing and integration of complementary specialized know-how, expertise, experience and techniques.

Main Achievements

- 22 member countries + 1 non-COST country (Australia).
- 71 research groups participating in 3 Working Groups; 10 new groups this year and 1 partner from industry.
- More than 30 joint publications to-date resulting from collaborations between the research groups.
- Funding obtained by certain groups as a result of being member of the Action.
- National and international funding obtained for projects that specifically involve collaborations between WG members (EPSRC-UK, PRIN-Italy, Marie Curie ITN).



COST is supported by the EU RTD Framework Programme



ESF provides the COST Office through a European Commission contract



Working Group activities

Second year activities

- 2nd Scientific Meeting in Portugal gathering 60 participants; joint WGs meeting so as to maximize cross-disciplinary interactions.
- 2nd Training School jointly organized with WISPOC 2013 School (114 trainees of which 47 supported by the Action).
- 12 STSMs.
- 5 inter-WG Workshops to strengthen collaborations on specific projects.

WG 1: Supramolecular Recognition and Sensing in Water

- Leader: Stefan Kubik (DE)
- Focus: Design and building of water-soluble supramolecular structures that can act as hosts in molecular recognition processes. Study of their binding properties in water. Elucidation of their structure.

WG 2: Supramolecular Control of Reactivity in Water

- Leader: Beatriu Escuder (ES)
- Focus: Use of weak, non-covalent interactions as a tool for the development of more active and more selective catalytic systems working in water.

WG 3: Self-assembly in Water

- Leader: Thorri Gunnlaugsson (IE)
- Focus: Synthesis of different classes of self-assembling units. Study of the self-assembly process and its possible control by external stimuli. Characterization of the structure and the properties of the obtained soft materials.



2nd Scientific Meeting in Caparica (PT)



2nd Training School, Bressanone (IT)



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