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CMST in Detail

The following examples are illustrative of actual research within this Domain, although it is not restricted to these activities alone.



Chemistry for life: a multidisciplinary collaboration between chemists, biologists, clinicians and agronomists in the design and development of new products for pharmacy, medicine, public health, and agriculture, including a more efficient and safe food production.

Manipulating molecular matter: learn how to handle, synthesise and manipulate matter at the molecular level, understand and control its reactivity and function, develop new catalysts to control the shape, size and properties of the product molecules; move from single molecule chemistry to supra- and macromolecular chemistry, producing smart materials tailored for specific applications.

Energy production: shifting from oil, natural gas and coal consumption to more efficient ways of using combustible fuels and investigate technologies based on renewable resources, in particular sunlight.

Caring for the planet: continuous improvement of the standards of living by reducing the environmental impact of technology in order to establish a sustainable growth, develop clean technology for innovative production, ensure increasingly accurate means for quality control, mastering ground remediation, hazard control, preserving and maintaining cultural heritage.

Space understanding and exploitation: rationalising processes occurring under extreme conditions in space and interstellar media, understanding processes occurring around spacecrafts, exploiting resources of stars and planets.

New ideas and initiatives are welcome as well as those with high interdisciplinary elements and close links and overlaps with other domains.

Last updated: 07 June 2010



COST is supported by the EU RTD Framework Programme



ESF provides the COST Office through a European Commission contract



The Council of the European Union provides the COST Secretariat

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