

## FANAS

# Friction and Adhesion in Nanomechanical Systems

Friction and Adhesion in Nanomechanical Systems (FANAS) is a EUROCORES Programme of the European Science Foundation (ESF).

The FANAS Programme fosters pan-European Collaborative Research, networking and training as well as dissemination of scientific results and activities developed in the frame of the programme.

Seventeen Funding Agencies from sixteen European Countries support this Programme.

After the Call for Full Proposals, the launch of this multidisciplinary programme is foreseen in March 2008.

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### Scientific Scope

Interfacial friction is one of the oldest problems in physics and chemistry, and certainly one of the most important from a practical point of view. Everyday operations on a broad range of scales, from nanometer and up, depend upon the smooth and satisfactory functioning of countless tribological systems. Friction is intimately related to both adhesion and wear, and all three require an understanding of highly non-equilibrium processes occurring at the molecular level to determine what happens at the macroscopic level.

The aim of this EUROCORES programme on FANAS is therefore to gain a better insight on the origins of friction and adhesion and to learn how to control them. To meet such goals, FANAS must bring together *theoretical* and *experimental* tools, as well as, *engineering* approaches which help transfer the basic understanding gained to questions of practical relevance. For this type of research a strong interdisciplinary collaboration is required that covers physical, chemical and material science aspects of tribology over a broad range of time and length scales.

**Deadline for the Call for Outline Proposals: 4<sup>th</sup> June 2007**  
**Deadline for Full Proposals: 17<sup>th</sup> September 2007**

