

## Editorial

### Topical Issue on Atomic Clusters at Surfaces and in Thin Films

A multitude of experimental and theoretical investigations of free atomic clusters has shown that clusters exhibit unique properties which widely deviate from those of the respective bulk materials. Geometrical and electronic structure, magnetism, chemical and optical properties are different on the nanoscale. However, for the development of technical applications the clusters are required to be assembled on a surface or embedded into a medium. Therefore, the system *clusters plus substrate/environment* comprises a fascinating subject for research and technology on the nanometer scale.

The present topical issue describes a concerted activity of the surface and cluster science communities to highlight novel features of deposited and embedded clusters. Its focus are electronic and magnetic properties as well as dynamics. Since all features crucially depend on the geometrical structure of the clusters, substantial effort is devoted to determine their exact atom arrangements. Modern tools like photoelectron emission microscopy, femtosecond laser pump/probe techniques, cavity ring-down spectroscopy, or scanning tunnelling microscopy along with surface science methods serve to reveal as yet unresolved spectroscopic details. The experimental findings are complemented by state-of-the-art theories in order to interpret the results and identify possible novel routes.

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