

Macromolecular engineering at the service of surface science

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The tuning of surface properties using polymer materials is crucial in several technologies such as adhesives, optics or microelectronics. Although systems such as polymer brushes or thermosetting coatings have been known for decades, it is still mandatory to improve their properties and performances through their chemical nature, morphology, functionality and responsive nature. The progresses in these fields have been accelerated since the appearance of novel robust, efficient and orthogonal chemical processes that afford advanced multifunctional macromolecular intermediates. This lecture will sum up the last advances and limitations of the different applications of such processes for the preparation of nanostructured polymer coatings and the study of their properties.