Letter from the Editor

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With the end of the year 2011 we are closing our Volume 6, and I would like to thank all authors who contributed to this very outstanding volume containing highlights in quantitative Biointerphase science. Several reviews and original research papers address advances in the preparation and characterization of interfaces used in cell/tissue cultures or sensor applications, and the progress made in understanding and manipulating cellular behavior. There is a comprehensive and inspiring review on the possibilities block copolymer micelle nanolithography offers to model the natural cellular environment (Lohmüller *et al*.), and a paper by Diesner *et al*. describing how Sum Frequency Generation spectroscopy can be used to monitor living cells through the expression of the extracellular matrix. Other papers describing ways to prepare cell substrates and the behavior of cells include studies of the effect of nanometric roughness (Wang *et al*.), ways to optimize surface properties for neural cell cultures (Theilacker *et al*., Zhou *et al.,* and Boggs *et al*.), and the effects of modulus and mechanical deformation (Walter *et al*.) or unidirectional polymeric nanostructures (Christophis *et al*.). The possible toxicity of nanotubes is reviewed by Stella; on the other side, Abel *et al*. demonstrate their use to mediate long distance cell-to-cell connections. Realization of nonfouling surface properties (Ahmad *et al*., Lokanathan *et al*., and Lorenz *et al*.) and novel ways to prepare antimicrobial surfaces (Green *et al*.) are described and reviewed. These new developments in the design and realization of cellular substrates and bioactive materials would not be possible without the ongoing improvement in our ability to characterize interfaces—and inter*phases*—with molecular, chemical and topographic resolution. Advances in analytical capabilities are described in the articles by Kulp *et al*., Ferner-Ortner-Bleckmann *et al*., Jing *et al*., Walter *et al*., Techane *et al*., Tyler *et al*., Grohmann *et al.,* and Huang *et al*. Practical aspects of drug delivery from stents are discussed in an article by Mani *et al*., and the modulation of inflammatory response by surface modification is the subject of the work by Valdes *et al*. The *in vitro* production of a membrane protein in polymersome membranes by a cell–-free expression system to characterize such membrane proteins is demonstrated by Nallani *et al*. Finally, we have two articles in this volume which are "off the main track," respectively addressing protein adsorption in an aerated solution and applications where biointerphases also play a role, i.e., cosmetics. The interaction of nanobubbles with BSA and papain films on a gold surface is investigated in the work by Kolivoska *et al*., and the tribological properties of cosmetic powder suspensions in compliant fingerprintlike contacts are the subject of the study by Timm *et al*.

Enjoy reading this excellent and quantitative mix of Biointerphase science!

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