

Wednesday Afternoon, April 22, 2026

Keynote Lectures

Room Town & Country A - Session KYL2-WeKYL

Keynote Lecture II

Moderator: Sandra E. Rodil, Universidad Nacional Autónoma de México

1:00pm KYL2-WeKYL-1 **Nanoengineered Materials and Coatings for Medicine and Beyond**, *Krasimir Vasilev* [krasimir.vasilev@flinders.edu.au], Flinders University, Australia

INVITED

In this keynote talk, I will give an overview of recent progress from my lab on development of plasma polymer facilitated nanoengineered surfaces and materials that benefit many areas of application. Over the years, we developed a range of plasma-based methods with allows us to control that entire spectrum of material surface properties, including chemical, physical, mechanical and topographical. The main focus of our research is the design and surface modification of novel medical devices and biomaterials for applications in areas such as tissue engineering, controlling inflammation and infections, drug delivery and medical diagnostics. However, our surface modification technologies are not limited to medicine. We have demonstrated the utility of nanoengineered plasma polymers for solving problems in other areas such as environmental science and remediation, water treatment and even wine making. I will present the engineering and chemical concepts underpinning “plasma nanoengineering” and give a range of examples of application of the technology in various fields, including commercial applications.

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