



Canadian Biomaterials Society
Société Canadienne des Biomatériaux

Quebec City Student Chapter CBS-QCSC
Chapitre Étudiant de Québec



is pleased to invite you to the seminar:

Characterization of solid-supported ultrathin films and molecular interactions using MP-SPR



Annika Jokinen

Application Scientist, BioNavis

Monday June 5th 2017

Université Laval

Room PLT-3370

- **11h00 Seminar**
- **12h15 Lunch (Pizza, offered by BioNavis)**
- **13h30 – 17h00 personal meetings with the speaker**

If you are interested in a personal meeting with the speaker (5 spots available) to discuss about possible collaborations and/or sample analysis, please contact us:

cbs-qcsc@biomaterials.ca



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Presented by: Annika Jokinen

Surface Plasmon Resonance (SPR) is widely used in label-free biochemical interaction analysis. However, the physical phenomenon is not limited to biochemistry but is applicable to other nanoscale characterization of thin films. Multi-Parametric Surface Plasmon Resonance (MP-SPR) is a new approach to the physical phenomenon, which utilizes full SPR angular spectral measurement and among other things allows accurate nanoscale characterization of thin films, and measurement of interactions to them.

MP-SPR instruments has been used to characterize ultrathin single- and multi-sheet CVD-graphene, where it showed high contrast per layer, allowing accurate layer thickness and refractive index characterization [1]. Recently the method has also been used to characterize inkjet-printed graphene, showing good correlation with other methods [in review]. MP-SPR has been shown to be highly sensitive method to characterize different metal coatings, nanolaminates and other nanoscale layers prepared by different methods such as ALD, Langmuir-Blodgett [2], and spin coating [3]. The same measurement providing layer properties can also be used to characterize molecular interactions to the layers in both gas- and liquid phase. Recently biomolecules and cells binding on spray coated hydroxyapatite was studied for biomaterial applications [4].



Metals



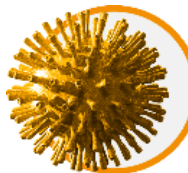
Electrochemistry



Thin solid films



Oxides



Nanoparticles



Graphene



Biomaterials



Nanocellulose

References:

- [1] Jussila et al., Optica 2016
- [2] Granqvist et al., Langmuir 2013
- [3] Vuoriluoto et al., J. Phys. Chem. B 2015
- [4] Vilardell et al., J.Funct.Biomat., 2016

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