



Colloid and Surface Science and Industrial Applications



Curso de Posgrado:

5 al 15 de Noviembre, 2018

Introduction to colloids and Surface Science

Taller:

12 y 13 de Noviembre, 2018

Workshop on Surface Science and Technology

Professor Pieter Stroeve,
University of California Davis, USA



Pieter Stroeve es Profesor Emérito del departamento de Ingeniería Química de UC Davis. Es graduado de la Universidad de Berkeley y realizó su doctorado en el Instituto Tecnológico de Massachusetts. Ha realizado investigaciones en separaciones biológicas, nanotecnología, bio-nanotecnología, coloides, ciencias de la superficie, energía solar y renovables. En ciencia de coloides y superficies, ha trabajado con biocapas de lípidos compatibles y materiales compuestos de nanopartículas y polímeros.

CONTENIDO DEL CURSO:

INTRODUCTION TO COLLOIDS AND SURFACE SCIENCE:

Thermodynamics of interfaces and classical equations of surface science. Measurement of Surface Tension. Cohesion and adhesion and model of Interfacial Tension. Soluble and Insoluble Surfactants. Monolayers, Micelle Formation, Adsorption at the Gas-Solid Interface, Intermolecular Forces.

Interaction of ensembles of Molecules, Electrical Aspects of Surface Chemistry,

Stability of Colloids, Electrokinetic Phenomena, Foams and Emulsions

WORKSHOP ON SURFACE SCIENCE AND TECHNOLOGY:

- Determination of the surface area of nanoporous solids;
- Control of evaporation from water surfaces;
- Stability and flocculation of colloids;
- Cleaning of surfaces: wetting; water repellency, detergency;
- Chromatography, Catalysis, Electro-osmosis; Electrophoresis; Streaming Potential; Nanoparticles.

INSCRIPCIONES:

apiattoni@plapiqui.edu.ar