

## Fluorescent Techniques to Measure in Real-Time Water Diffusion Through Polymeric Surfaces

*Monday, 5 December 2022 16:00 (2 hours)*

Fluorescent dyes are widely used in fluorescence microscopy, providing important advantages such as the detection of specific components or changes in the surrounding medium of a component of interest. The variety of commercial fluorescent dyes and their stability make these tools ideal for potential implementation as probes of molecular-scale changes. In particular, we are interested in implementing different fluorescent dyes for the real-time measurement of droplet diffusion through polymeric surfaces and their participation in the adaptation of the structure of these polymeric structures when they are in contact with water.

Our current set-up contemplates the use of a monolayer of pHrodo Green dye sensitive to changes in pH adhered to a glass cover slip and the subsequent deposition of a layer of Polyacrylic Acid (hydrophilic) on which a drop of solution of Ph 4. Using a confocal fluorescence microscope, the change in the intensity of the fluorescent light was measured in real time before and during the deposition of the droplet to find time constants that allow us to analyze the adaptation and interaction of the polymeric surface in contact with the drop.

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