



Masterarbeit am Institut für Chemie der Polymere

The aim of this project is to focus on the development of a chromo-fluorogenic sensing hybrid material for sucrose detection, based on coated silica nanoparticles by employing the ion-channel approach.

Sucrose is an important monosaccharide present in sweet drinks and juices, and nowadays its detection in adulterated samples (for example, fruity juices) is essential for the food and beverage industry and for the consumer's nutrition and safety. Conventional quality control analysis involves expensive instrumentation, long times, complicated pre-treatment and well trained staff. Therefore, more sophisticated analytical controls have to be followed and faster, affordable, selective and "easy-to-use" methods are required by food industries. In relation to our interest in the design a new sucrose sensing system, a new hybrid organic–inorganic material will be developed. Silica will be selected as inorganic support among others due to its easy preparation, straightforward surface functionalization and good stability in both water and organic solvents. The development of this new sensing nanomaterial during the Master Thesis project has promising potential in the design and study of the next generation of "**in situ**" sensors.

This Master Thesis project will be conducted at the ICP (Institut für Chemie der Polymere) during minimum 6 months, full time.

If this project has fascinated you, please contact Dr. Yolanda Salinas.

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