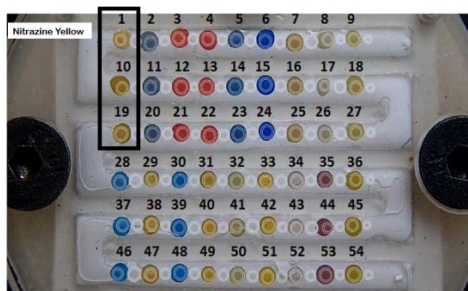


Title	optical pH sensors based on Ormosil matrix and supported in PVDF
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Project description:

Colorimetric sensor arrays (CSAs) utilize cross-responsive, chemically responsive dyes to generate a response unique to a given analyte that can be quantified by digital imaging. They are suitable for sensing wide range of organic and inorganic materials (such as H^+ , metal ions, glucose, VOCs compounds, explosives, biogenic amines and gases like oxygen, carbon dioxide and sulfur dioxide). CSAs are interesting because they also can solve practical issues of cost and portability especially in connection to inexpensive technologies such as visual imaging (e.g., digital cameras and scanners).

Several optical sensor (“optodes”), have been designed to determine pH, but all suffer from limited measuring range. They have been long used in practical cases such as clinical analysis, environmental analysis, and process control. In the course of calibration, arrays produce large amounts of data and thus quantitative and qualitative information are mixed up. This type of data can be handled with mathematical and chemometrics methods. In addition, the development of new sensor technologies faces the dilemma of trying to create sensors that are both increasingly sensitive and increasingly robust (i.e., stable to exposure to analytes or the environment). In this context, the choice of the colour space plays an important role. The hue or H component of the hue, saturation, value (HSV) colour space, provide a robust and precise parameter to be correlated to the observable.

**Publications:**

research line just started

Collaborations/Network:

Not yet available.

Research funding:

Financial support from the Analytical Chemistry group activities.