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Showcasing research from Professor Elizabeth New's laboratory, School of Chemistry, University of Sydney, NSW, Australia.

A fluorescent sensor array based on carbon dots for the accurate determination of pH

Carbon dots-based fluorescent sensor array for precise pH determination. Synthesised hydrothermally using fructose and p-phenylenediamine, the carbon dots exhibit distinct fluorescence responses to pH changes, with hydroxyl and amino groups playing key roles. Machine learning models, including Gaussian process regression and linear discriminant analysis, improved pH classification and quantification. The sensor array has broad potential applicability, accurately distinguishing pH levels in fresh and spoiled milk samples.

As featured in:



See Elizabeth J. New *et al.*,
Sens. Diagn., 2024, **3**, 1923.