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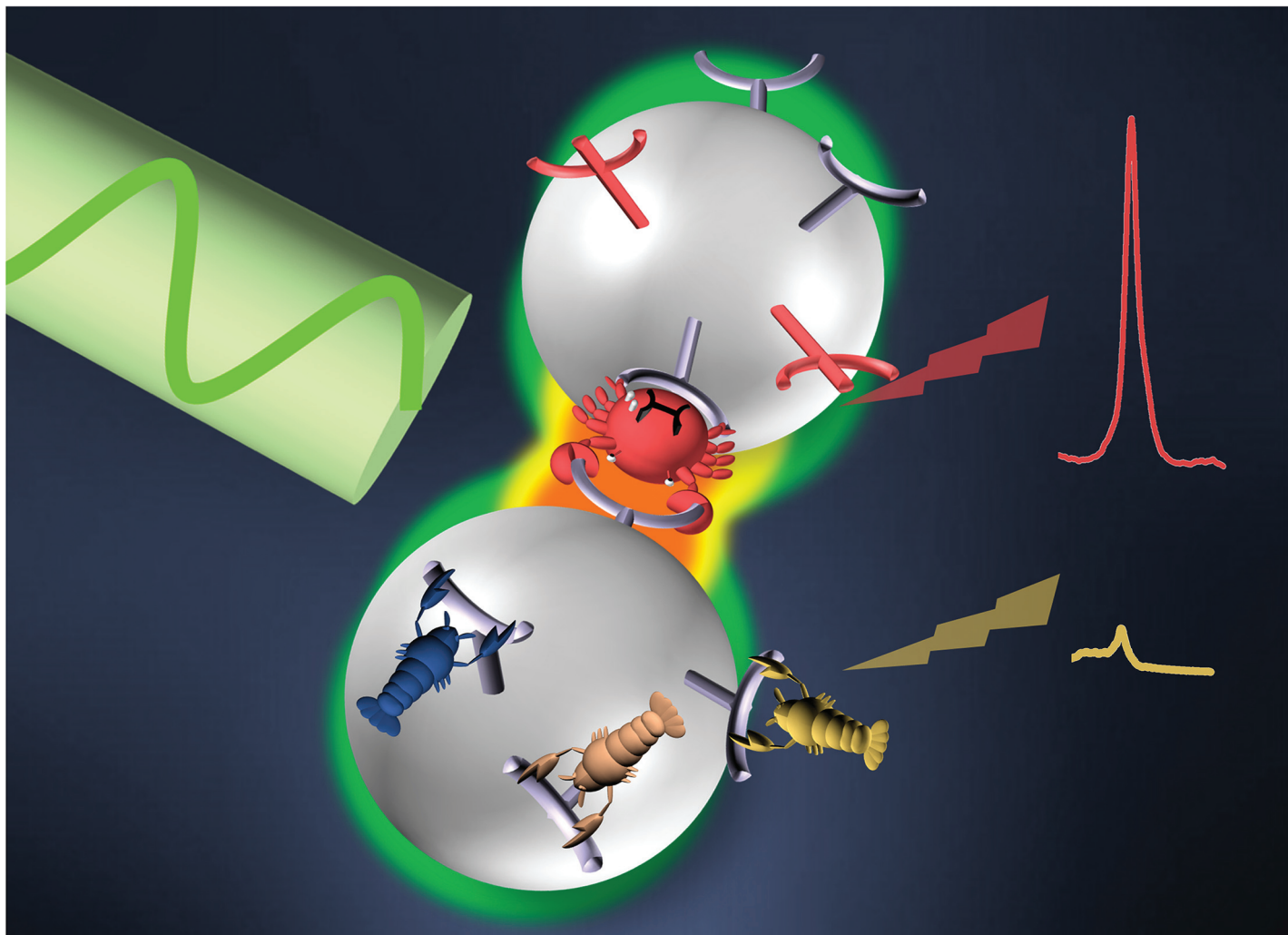Achieve a professional qualification that inspires confidence and trust

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Showcasing research from Dr. Lu's and Prof. Mizaikoff's laboratory (Nanjing University of Science and Technology, China and Ulm University, Germany).

Glucose sandwich assay based on surface-enhanced Raman spectroscopy

A facile and sensitive glucose sandwich assay that uses surface-enhanced Raman scattering (SERS) has been developed. 3-Aminopheyonyl boronic acid forms specific *cis*-diol compounds with glucose molecules avoiding interferences in urine and enabling the selective detection of glucose. As the actual Raman reporter, 3-amino-6-ethynylpicolinonitrile exhibited a distinctive SERS peak in the Raman silent region, thus increasing the sensitivity of glucose detection to 10^{-11} M. Additionally, the developed SERS assay was reusable, and its applicability in artificial urine samples demonstrated future clinical utility, thus confirming the potential of this innovative technology as a diagnostic platform for glucose sensing.

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