

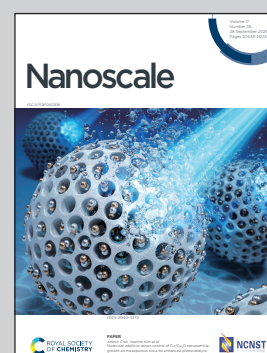
Showcasing research from Professor Chong Haur Sow's Nanomaterials Research Lab, National University of Singapore, Singapore.

Laser-initiated site-selective formation of fluorescing silver-iron oxide nanocomposites for electron detection

A site-selective and facile means of forming silver-iron oxide nanocomposites is achieved by directing a continuous wave laser at iron oxide nanoflake surface while submerging the flakes in a silver nitrate solution. The nanocomposite's size and properties can be tuned by varying the laser parameters, such as speed and laser power density. Uniquely, these nanocomposite particles exhibit bright red fluorescence under yellow light excitation, allowing optical determination of composite formation. This composite also emits stronger fluorescence after electron interaction, allowing it to serve as an electron irradiation detector with optical feedback.

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