

Rare Earth Metals for NIR-II Bioimaging Fluorescent Probes

Bioimaging in the NIR-II/SWIR wavelength range is currently used to research cancer detection and treatment, monitoring metabolic and organ functions or measuring blood flow and heartrate non-invasively. The research is currently progressing from early proof of concept stages to describe more specific bio experiments using the imaging as a tool to monitor the systems. However, research to find more suitable and functional nanoprobes, small molecules and particles that emit fluorescent light in the SWIR, with the potential to be functionalized and used in vivo, is still a very important part of this research.

A research team from China is reporting on experiments using particles based on rare earth metals and they can show high performance and tunability of these probes. The functionality is shown by sensitive in-vivo measurements of tumors and blood vessels. The researchers note that these probes are promising due to their bright emission as well as biocompatibility.

Featured Paper/Publication: [808 nm laser-triggered NIR-II emissive rare-earth nanoprobes for small tumor detection and blood vessel imaging](#),
Materials Science and Engineering: C, 2019

Reference Lab: Hongrong Liu, Hunan Normal University, China

Featured Product: [NIRvana](#)