

Luminol Functionalized Siliceous Zeolite Nanoparticle as Chemosensor for Iron Ion Detection**Norfariha Hassan and Zainab Ramli***Department of Chemistry, Faculty of Science, University Teknologi Malaysia (UTM),
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The recognition and the sensing of cations have received considerable attention because of their important roles in biological, environmental and industrial processes. In particular, the sensing of iron has gained attention due to its widely distributed in nature and also one of the important elements in biological and environmental systems. In this research, of luminol chemosensor based on solid support has been designed for detection of metal ions. The immobilization of luminol into nanosiliceous zeolite particle is demonstrated to investigate chemosensors property for detecting metal ions. Siliceous zeolite namely silicalite in nanoparticles sized has been chosen as solid support and synthesized hydrothermally. 3-(Triethoxysilyl)-propylamine (APTES) and glutaraldehyde were used as functionalization and bridging agent to immobilize luminol with silicalite. This luminol functionalized silicalite chemosensor changes colour from red to yellow in aqueous solution containing Fe^{3+} ions, which could be detected by the naked-eye at ppm level concentration of Fe^{3+} ions. The fluorescence result for this chemosensor shows the fluorescence quenching for Fe^{3+} in aqueous solution at $\lambda_{\text{ex}} = 372\text{nm}$.

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