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Title:	A highly emissive fluorescent Zn-MOF: molecular decoding strategies for solvents and trace detection of dunnite in water
Authors:	Das, Prasenjit (/jspui/browse?type=author&value=Das%2C+Prasenjit) Mandal, S.K. (/jspui/browse?type=author&value=Mandal%2C+S.K.)
Keywords:	Solvent polarity parameter High selectivity Explosives detection Fluorescence
Issue Date:	2018
Publisher:	Royal Society of Chemistry
Citation:	Journal of Materials Chemistry A, 6(43), pp. 21274-21279
Abstract:	The strategic exploration of a highly emissive methoxy and amine-functionalized fluorescent three-dimensional MOF, $\{[Zn_2(MTAIA)(DMF)_2(H_2O)] \cdot H_2O\}_n$ (1), based on a new custom-designed tetracarboxylate (H4MTAIA) ligand, is demonstrated for (i) decoding of solvents based on solvent polarity parameters and an unprecedented dual readout (lifetime and quantum yield) identification scheme and (ii) ultrafast detection of highly explosive dunnite, which was used during World War I, with high selectivity in water at the ppb level for the first time. This is a rare example of such a dual functional chemosensor.
URI:	<a href="https://pubs.rsc.org/en/content/articlelanding/2018/ta/c8ta08546c#!divAbstract">https://pubs.rsc.org/en/content/articlelanding/2018/ta/c8ta08546c#!divAbstract</a> ( <a href="https://pubs.rsc.org/en/content/articlelanding/2018/ta/c8ta08546c#!divAbstract">https://pubs.rsc.org/en/content/articlelanding/2018/ta/c8ta08546c#!divAbstract</a> ) <a href="http://hdl.handle.net/123456789/2188">http://hdl.handle.net/123456789/2188</a> ( <a href="http://hdl.handle.net/123456789/2188">http://hdl.handle.net/123456789/2188</a> )
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