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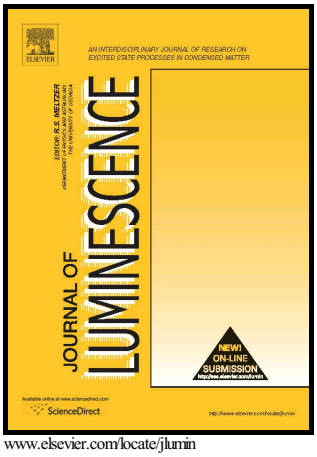

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Aggregation-induced ratiometric emission active monocarbazone: Ratiometric fluorescent probe for Cu^{2+} in either solution or aggregation states

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Abstract: A simple monocarbazone **1** derived from 2*H*-benzo[*h*]chromene-3-carbaldehyde and carbazide exhibited aggregation-induced ratiometric emission upon the addition of water to CH_3OH solution ($\Delta\lambda_{em}$= 30 nm). Upon Cu^{2+} treatment, the fluorescence emission of **1** displayed a significant red shift in both CH_3OH and H_2O solutions. In addition, **1** can detect Hg^{2+} through the fluorescence quenching in H_2O solution. The response mechanism to Cu^{2+} involved an intermolecular charge transfer coupled with a metal-induced assembly, whereas that to Hg^{2+} was probably due to a photo-induced electron transfer coupled with metal-induced assembly, which were thoroughly