Title:	A perfectly linear trinuclear zinc–Schiff base complex: Synthesis, luminescence property and photocatalytic activity of zinc oxide nanoparticle
Authors:	Kaur, Gurpreet (/jspui/browse?type=author&value=Kaur%2C+Gurpreet) Choudhury, A.R. (/jspui/browse?type=author&value=Choudhury%2C+A.R.)
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Abstract:	A perfectly linear trinuclear zinc(II) complex [Zn3L2(μ-O2CCH3)2] (1) containing a (N,O)-donor Schiff base ligand, (H2L = N,N′-bis(salicyaldehydene)-1,3-diaminopropan-2-ol) has been synthesized and characterized by single crystal X-ray diffraction study. The X-ray crystal structure of 1 contains three zinc(II) centers which are inter-connected through μ2-phenolato and μ-acetato bridges. The terminal zinc centers are in square pyramid geometry and central zinc ion is in distorted octahedral coordination geometry. Both H2L and 1 exhibit good fluorescence properties in solution. 1 has been used as a precursor to fabricate zinc oxide nanoparticles (ZnONPs) by pyrolytic method. ZnONP has been characterized by powder X-ray diffraction (PXRD), field emission scanning electron microscopy (FESEM), FT-IR spectroscopy and UV–Vis spectroscopy techniques. ZnONP has been employed as photocatalytic agent to degrade the organic dye, viz. Methylene blue under visible light and by exposing to visible light for 1 h, ZnONP degraded methylene blue dye nearly 80%.
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