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Synthesis and characterization of  $\mathrm{Ba}^{2+}$  and  $\mathrm{Zr}^{4+}$  co-doped titania nanomaterial which in turn used as an efficient photocatalyst for the degradation of rhodamine-B in visible light

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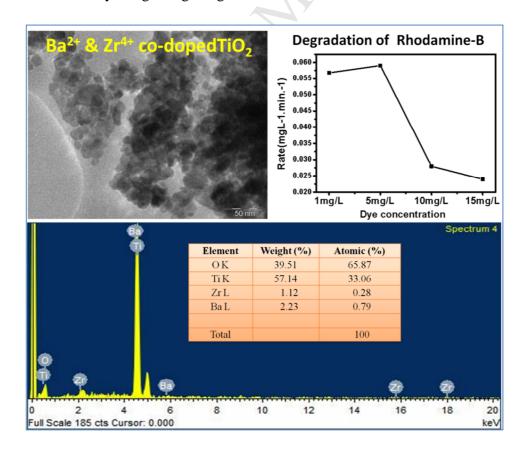
## ACCEPTED MANUSCRIPT

 ${\rm Ba^{2^+}}$  and  ${\rm Zr^{4^+}}$  co-doped titania nanomaterial: An efficient photocatalyst for the degradation of rhodamine-B in visible light

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The  $Ba^{2+}$  &  $Zr^{4+}$  co-doped  $TiO_2$  nonmaterial was synthesized by sol-gel method. The presence of  $Ba^{2+}$  and  $Zr^{4+}$  dopants on to the  $TiO_2$  assures the enhancement of the photocatalytic activity of pure  $TiO_2$  and the catalyst degrading 5 mg/L of Rhodamine-B with 120 min.



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