



Catecholase Activity of a Mononuclear Cobalt(III) Azido Complex

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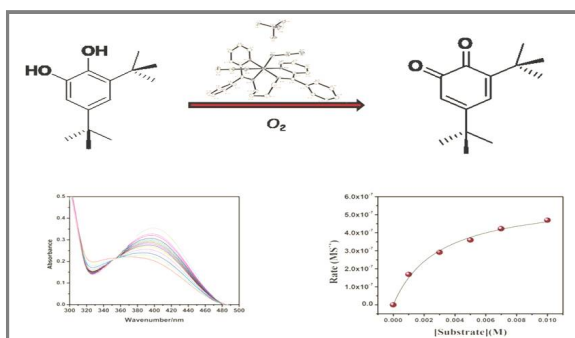
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ABSTRACT

One mononuclear cobalt(III) azido complex of the type $[Co(L)(N_3)_2]ClO_4$ (**1**) [$L = N,N'$ -(bis(pyridine-2-yl)benzylidene)-1,4-butanediamine] behaves as an effective catalyst towards the oxidation of 3,5-di-tert-butylcatechol in dichloromethane (DCM) to its corresponding quinone derivative in aerial oxygen. The reaction follows Michaelis-Menten enzymatic reaction kinetics with a turnover number (K_{cat}) of $4.68 h^{-1}$.

Graphical Abstract



Catecholase activity

Keywords: Cobalt complex, Schiff base, Catecholase activity, Michaelis-Menten kinetics.