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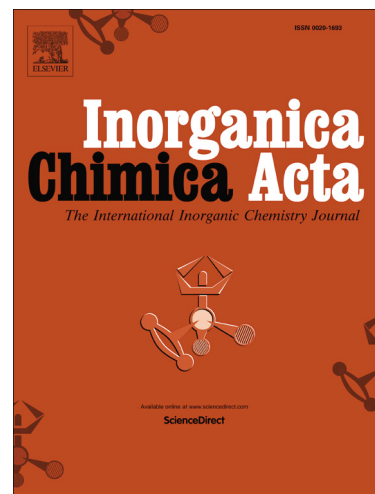
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## Synthesis of Heteroleptic Pentavalent antimonials bearing Heterocyclic Cinnamate moieties and their Biological studies

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### ABSTRACT

In the search of new drugs with high therapeutic efficacy, antimony (V) dicarboxylates bearing cinnamate moieties with general formula  $[\text{SbR}_3(\text{O}_2\text{CR}')_2]$  have been synthesized and characterized by spectroscopic techniques like FTIR, multinuclear ( $^1\text{H}$  and  $^{13}\text{C}$ ) NMR and single crystal X-ray diffraction. The organic moieties (R) in the complexes are phenyl and *p*-tolyl while the carboxylates are heterocyclic acrylates. In the crystal structure of  $[\text{Sb}(\text{phenyl})_3(\text{O}_2\text{CC}_2\text{H}_2\text{C}_4\text{H}_3\text{O})_2]$  (**1**),  $[\text{Sb}(\text{phenyl})_3(\text{O}_2\text{CC}_2\text{H}_2\text{C}_4\text{H}_3\text{S})_2]$  (**3**),  $[\text{Sb}(\textit{p}\text{-tolyl})_3(\text{O}_2\text{CC}_2\text{H}_2\text{C}_4\text{H}_3\text{S})_2]$  (**5**) and  $[\text{Sb}(\textit{p}\text{-tolyl})_3(\text{O}_2\text{CC}_2\text{H}_2\text{C}_4\text{H}_2\text{O}(\text{CH}_3))_2]$  (**6**), antimony was found to adopt a distorted trigonal bipyramidal geometry and was monomeric with phenyl or *p*-tolyl groups at

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