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Organo-Oxotin Cages Containing Arsinato Ligands

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ORGANO-OXOTIN CAGES CONTAINING ARSINATE LIGANDS

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Abstract New monoorgano-oxotin cages which possess bridging arsinate ligands have been prepared and characterized by X-ray and ^{119}Sn NMR spectroscopy. The tetrameric, trimeric, and dimeric tin compounds containing arsinate ligands and six- and four-membered stannoxane rings exhibit characteristics which parallel the phosphinate-bridged cages previously reported.^{1,2} Conversion of the tetrameric cube structure, $[\text{n-BuSnO}(\text{O}_2\text{AsMe}_2)]_4$, to a mixed butterfly composition is easily accomplished by addition of arsinic, phosphinic, or carboxylic acid. For example, two butterfly compounds that we formed are: $[\text{n-BuSn}(\text{OH})(\text{O}_2\text{AsMe}_2)(\text{OP}(\text{O})\text{Me}_2)]_2$ and $[\text{n-BuSn}(\text{OH})(\text{O}_2\text{AsMe}_2)(\text{OAs}(\text{O})\text{Me}_2)]_2$.

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