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Title:Synthesis, structure and spectroscopic properties of a novel compound bis(benzylamino)silver(I) benzylcarbamate
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Abstract:A novel silver-containing compound, bis(benzylamino)silver(I) benzylcarbamate, with an unusual molecular structure is easily synthesized by the reaction of benzylammonium benzylcarbamate and silver oxide. It crystallizes in the triclinic crystal system with the space group with a = 5.2006 (5), b = 14.6298 (15), c = 14.7246 (15) A˚, α = 68.729 (2), β = 83.507 (2), γ = 85.412 (2)° and Z = 2. In the crystal, one Ag atom coordinates with the two amino groups in two benzylamine molecules, and there are no silver-silver and silver-oxygen interactions. The carboxylate groups take part in balancing the electric charge and forming hydrogen bonds. Both the compound and the starting material benzylammonium benzylcarbamate exhibit room-temperature solid-state emissions with the peaks at 300 and 406 nm, respectively. 
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Main heading:Silver
Controlled terms:Carboxylation - Hydrogen bonds - Silver oxides - Synthesis (chemical)
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