



Example of Disulfide Conformational Change in the Solid State: Preparation, Optical Properties, and X-ray Studies of a Cystamine-Based Iodoplombate Hybrid

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Résumé en anglais	A novel cystamine-based hybrid, namely, α -[NH ₃ (CH ₂) ₂ SS(CH ₂) ₂ NH ₃ PbI ₆] \cdot 2H ₃ O (1a), was prepared under solvothermal conditions. Interestingly, 1a, which is built up from isolated PbI ₆ octahedra, can be easily changed into its polymorph, namely, β -[NH ₃ (CH ₂) ₂ S-S(CH ₂) ₂ NH ₃ PbI ₆] \cdot 2H ₃ O (1b) only by heating it up to 45 °C. According to the results of X-ray diffraction analyses, the polymorphic phenomenon of 1a and 1b results from a conformational change in the helical diprotonated cystamine cation in the solid state. Both 1a and 1b crystallized in the orthorhombic Pna2 ₁ space group. The reversibility of this transformation is proved by single-crystal X-ray diffraction and second harmonic generation measurements.
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