Hye Rin Song, J Chemical Sci 2018, Volume: 9
DOI: 10.4172/2150-3494-C4-027

5th International Conference on

Organic and Inorganic Chemistry

July 12-13, 2018 | Paris, France

Hydrothermal synthesis, structure determination, and characterization of a noncentrosymmetric europium iodate

Hye Rin Song
Chung-Ang University, South Korea

A new noncentrosymmtric europium iodate has been synthesized through a hydrothermal reaction using Na2CO3, Eu(NO3)·6H2O, HIO3, and water as reagents. The crystal structure of the newly synthesized iodate was determined by single-crystal X-ray diffraction. The material crystallizes in the rhombohedral space group, R3c (No. 161) with the unit cell parameters of a = b = 21.968(4) Å and c = 13.363(3) Å. The iodate material reveals three-dimensional framework consisting of EuO8, IO3, and IO4 polyhedra. The IO3 and IO4 polyhedra are in asymmetric coordination environment due to the stereochemically active lone pairs.Full characterization including energy dispersive X-ray spectroscopy (EDS), thermogravimetric analysis (TGA), second-harmonic generation (SHG) measurements, infrared, and UV–vis diffuse–reflectance spectroscopy are also presented.

Biography

Hye Rin Song obtained her bachelor degree at Daejeon University. Hye Rin is working on the synthesis and characterization of new europium iodate materials under the guidance of Prof. Kang Min Ok at Chung-Ang University.

shr1859@naver.com

Notes: