

## E0029

**$\text{Ln}_2[\text{O}_2\text{C}-(\text{CH}_2)_3-\text{CO}_2]_3(\text{H}_2\text{O})_z \cdot m\text{H}_2\text{O}$  Framework Structures Features.** G. Punte<sup>1</sup>, G. Echeverría<sup>1,2</sup>, C. G. Pozzi<sup>1</sup>, E. V. Brusau<sup>3</sup>, G. E. Narda<sup>3</sup>, J. A. Ellena<sup>4</sup>, <sup>1</sup>LANADI e IFLP, Dept. de Física, Fac. de Cs. Exactas, <sup>2</sup>Fac. de Ingeniería, UNLP, Argentina, <sup>3</sup>Area de Química General e Inorgánica “Dr. G. F. Puelles”, Fac. de Química, Bioquímica y Farmacia, UNSL, Argentina, <sup>4</sup>Inst. de Física São Carlos, Univ. de São Paulo, SP, Brazil.

Frameworks characteristics of three lanthanide glutarates (*glut*) synthesized from aqueous solutions are discussed. Two of them,  $[\text{Nd}_2(\text{glut})_3(\text{H}_2\text{O})_2] \cdot 4\text{H}_2\text{O}$  (I) and  $[\text{Nd}_2(\text{glut})_3(\text{H}_2\text{O})_4] \cdot 10\text{H}_2\text{O}$  (II), were produced at room temperature, while the third one,  $[\text{La}_2(\text{glut})_3(\text{H}_2\text{O})_3] \cdot 2\text{H}_2\text{O}$ , was obtained at 313K (Benmerad et al, 2004). The three compounds crystallize in different space groups, contain unlike number of hydration waters and have dissimilar number of waters coordinated to Ln, but their 3D structures can be described as 1D networks built from O bridged Ln(III) cations and linked by *glut* anions in a way that channels, running parallel to the 1D network are developed. I is built from Nd(III) cations coordinated to nine O,  $\text{NdO}_8(\text{H}_2\text{O})$ , and shows to be similar to others already reported in the literature. II presents a novel framework structure with tenfold coordinated Nd(III) atoms,  $\text{NdO}_8(\text{H}_2\text{O})_2$ . III shows two independent La atoms, which are nine- and tenfold coordinated, leading to  $\text{LaO}_7(\text{H}_2\text{O})_2$  and  $\text{LaO}_9(\text{H}_2\text{O})$  polyhedra, respectively.

Benmerad *et al*, *Acta Cryst.* (2004). C60, m119-m122.