Synthesis, structural and spectroscopic properties of tetra(tetraethylammonium) heptaisothiocyanato uranate(III) and neodymate(III).

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Streszczenie

The synthesis and characterization of a new uranium(III) compound and its neodymium(III) analogue of the formulas $[(C_2H_5)_4N]_4U(NCS)_7$ (I) and $[(C_2H_5)_4N]_4Nd(NCS)_7$ (II) are reported. Both compounds are isomorphic and crystallize in the tetragonal system, space group *I*4/*mmm* with: , ,*Z* = 4, and , ,*Z* = 4, . The IR, Raman and electronic spectra of the compounds have been recorded in the 30–4000 cm^{-1} and 4000–30 000 cm^{-1} spectral ranges, respectively, and are further discussed. The assignments of the IR and Raman frequencies based on theoretical considerations are given

Słowa kluczowe

Uranium(III) complexes, Neodymium(III) complexes, Thiocyanato complexes, Crystal structure, IR spectra, Raman spectra, Electronic spectra

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