International Conference "Functional Materials"

ICFM - 2013

ABSTRACTS

Ukraine, Crimea, Partenit
2013

The conference is dedicated to
150th Anniversary of V. I. Vernadsky
95th Anniversary of Taurida National V. I. Vernadsky University

FUNCTIONAL MATERIALS-2013

ABSTRACTS
of International Conference
"Functional Materials"
ICFM'2013

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У книзі представлені тези доповідей Міжнародної конференції «Функціональні матеріали-2013» ICFM'2013. Конференція присвячена актуальним проблемам фізики, технології та застосування нових матеріалів і структур з певними функціональними властивостями.

Для учених та аспірантів, які працюють в області фізики, технології і застосування функціональних матеріалів.

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In the book are presented reports abstracts of International Conference "Functional Materials - 2013" ICFM'2013. Conference is devoted to actual problems of physics, technology and applications of new materials and structures with the certain functional properties.

For scientists and graduate students in the field of physics, technologies and application of functional materials.

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Функциональные материалы – 2013: Тезисы Международной конференции «Функциональные материалы» ICFM'2013, 29 сентября – 5 октября, 2013 г. Научное издание / Под редакцией В. Бержанского. – Симферополь, ДИАЙПИ, 2013. – 502 с.

В книге представлены тезисы докладов Международной конференции «Функциональные материалы-2013» ICFM'2013. Конференция посвящена актуальным проблемам физики, технологии и применения новых материалов и структур с определенными функциональными свойствами.

Для ученых и аспирантов, которые работают в области физики, технологии и применения функциональных материалов.

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BQ-1P/15 NMR Study of Gallosilicate Natrolite

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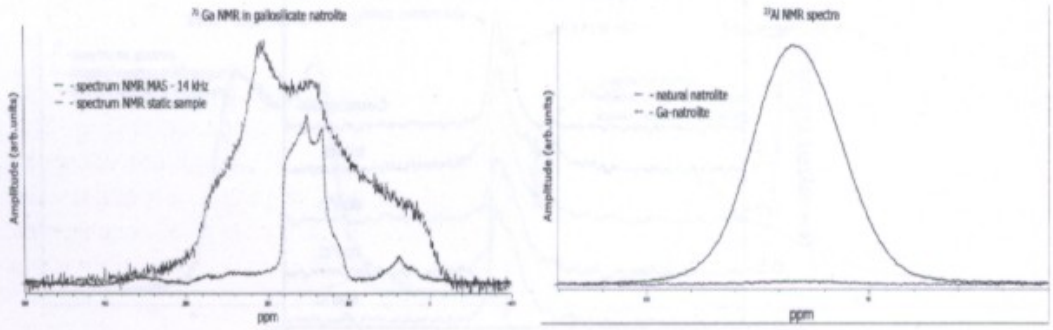
Zeolites are three-dimensional, crystalline networks of AlO_4, and SiO_4 tetrahedral [1]. Gallosilicate natrolite is obtained from alumosilicate natrolite ($Na_{16}Al_{16}Si_{24}O_{80}$ $16H_2O$) by substitution of aluminium for gallium in a precrystalline zeolite gel [1]. So gallium is directly below aluminium in the periodic table, they form chemically similar GaO_4 and AlO_4 tetrahedra. There are two synthetic forms of gallosilicate natrolite, orthorhombic ($Na_{16}Ga_{16}Si_{24}O_{80}$ $16H_2O$) and tetragonal ($Na_8Ga_8Si_{12}O_{40}$ $8H_2O$) [2,3]. These forms differ in the ordering of Si or Ga atoms. In the orthorhombic form Si and Ga atoms have separate atomic sites. In the tetragonal form each site is shared by Si and Ga atoms in a 3:2 ration.

In report a study of orthorhombic natural natrolite ($Na_{16}Al_{16}Si_{24}O_{80}$ $16H_2O$) and gallosilicate natrolite ($Na_{16}Ga_{16}Si_{24}O_{80}$ $16H_2O$) by means of NMR and NMR MAS of ^{1}H, ^{23}Na, ^{25}Al, ^{29}Si, ^{69}Ga and ^{71}Ga nuclei will be presented. The obtained results for two similar natrolites will be compared with published results [4,5]. The gallosilicate natrolite was hydrothermally synthesised in a route described in [5] and characterized by XRD and EDX measurements.



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