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Films / SHIN Yooleemi, FENG Wuwei, DUONG Anh Tuan, CHO Sunglae(울산대학교, 물리학과)

P2-D069*

Electron spin resonance study of ferromagnetism in hydrothermally treated C₆₀ / LEE Cheol Eui, KIM Dowan, LEE Kyu Won(Department of Physics and Institute for Nano Science, Korea University)

P2-D070*

Spectroscopic study of highly-oriented pyrolytic graphites modified by deuterium-ion-irradiation / PARK Jun Kue, LEE Kyu Won, KWEON Jin Jung, LEE Cheol Eui, NOH S. J.¹, KIM H. S.¹, LIM S. T.², KIM G. H.³(Department of Physics and Institute for Nano Science, Korea University, Seoul 136-713, Republic of Korea. ¹Department of Applied Physics, Dankook University, Yongin 448-701, Republic of Korea. ²Department of Energy Systems Engineering, Seoul National University, Seoul, Korea)

P2-D071*

Angle Dependence Of Half Metallicity In Bilayer Zigzag Graphene Nanoribbons / JEON giwan, LEE Kyu Won, LEE Cheol Eui(Department of Physics and Institute for Nano Science, Korea University, Seoul 136-713)

P2-D072*

Ba₂Co_{2-x}Zn_xFe₁₂O₂₂ (x = 0, 2)의 외부자기장에 따른 뫼스바우어 분광 연구 / 임정태, 김삼진, 김철성(국민대학교, 물리학과)

P2-D073*

분쇄 조건에 따른 Y-type 육방정 페라이트의 고주파수 특성 연구 / 이찬혁, 조광래, 김철성(국민대학교 물리학과)

P2-D074

Sodium이 결합된 FeSO₄F 물질의 자기적 특성 연구 / 이인규, 김희승, 심인보, 김철성(국민대학교, 물리학과)

P2-D075*

Hysteresis of Y-type Hexaferrite using XMCD / 박재훈, 천세환, 김기훈, 박병규², 김재영², 이한구², 노우석³(포스텍, 물리학과. ¹서울대학교, 물리천문학부. ²포항공가속기연구소. ³포스텍, 물리학과)

P2-D076*

Anisotropic Spin & Angular Moment of d Electron System Caused By Low Symmetry Field - Co²⁺(d⁷) Cluster Calculation / 박재훈, 김동환(POSTECH, 물리학과)

P2-D077

산소 결함 [RBa][MnFe]O_x (R=Nd, Pr) 페로브스카이트 산화물의 방사광 분광 연구 / 김대현, 황지훈, 이은숙, 강정수, KOLESNIK S.¹, DABROWSKI B.¹, 이한구², 김재영²(가톨릭대학교 물리학과. ¹Northern Illinois University. ²포항공가속기연구소)

P2-D078

스피넬 산화물 Ti_xFe_{3-x}O₄ 박막에서 Ti 성분비 변화에 따르는 전이금속 이온 분포 및 자기적 성질 조사 / 김광주, 고태영, 윤성욱, 김철성, 이영배²(건국대학교 물리학과. ¹국민대학교 나노전자물리학과. ²한중대학교 교양학과)

P2-D079

Observation of out-of-plane exchange bias in BiFeO₃ thin films: SUNG Kildong, PARK Youngan, HUR Namjung, JUNG JongHoon(인하대학교, 물리학과)

P2-D080

The Electronic and Magnetic Structure of MnTe₂ / 김준원, 김규, 민병일(포항공과대학교 물리학과)

P2-D081*

Magnon Contribution to The Specific Heat of (Y/Lu)MnO₃ Estimated from Inelastic Neutron Scattering Data / OH Joosung, JEONG Jaehong, NAKAJIMA Kenji¹, OHIRA-KAWAMURA Seiko¹, PARK Je-Geun²(IBS Research Center for Functional Interfaces and Correlated Electron Systems, Seoul National University. ¹Materials and Life Science Division, J-PARC Center, Japan Atomic Energy Agency. ²IBS Research Center for Functional Interfaces and Correlated Electron Systems, Seoul National University)

P2-D082*

Long- and Short-Ranged Structure of Multiferroic Pb(Fe_{0.5}Nb_{0.5})O₃ / SIM Hasung, LEE Sanghyun, HONG Kun-Pyo, LEE Seongsu¹, KAMIYAMA Takashi², OTOMO Toshiya², CHEONG Sang-Wook³, PARK Je-Geun(IBM Research Center for Functional Interfaces and Correlated Electron Systems, Seoul National University, Seoul 151-747, Korea. ¹Neutron Science Division, Korea Atomic Energy Research Institute, Daejeon 305-353, Korea. ²Institute of Materials Structure Science & J-PARC Center, KEK, Tsukuba 305-0801, Japan. ³Rutgers Center for Emergent Materials and Department of Physics and Astronomy, Rutgers University, Piscataway New Jersey 08854, USA)

P2-D083

Raman scattering studies of LiFe_{1-x}Mn_xPO₄: CHUNG Joo-Hee, NGUYEN Thi Minh Hien, CHEN Xiang-Bai¹, KWON Woo Jun², KIM Chul Sung², YANG In-Sang(Ewha Womans University, Department of Physics. ¹Konkuk University, Department of Applied Physics. ²Kookmin University, Department of Physics)

초록내용

발표번호	P2-D083
분과	응집물질물리학분과 (Condensed Matter Physics Division)
저자	CHUNG Joo-Hee (발표자 학생), NGUYEN Thi Minh Hien, CHEN Xiang-Bai ¹ , KWON Woo Jun ² , KIM Chul Sung ² , YANG In-Sang (발표자 일반) <i>Ewha Womans University, Department of Physics.</i> ¹ <i>Konkuk University, Department of Applied Physics.</i> ² <i>Kookmin University, Department of Physics.</i>
제목	Raman scattering studies of $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$
초록본문	<p>The olivine crystal structured LiFePO_4 is an ideal candidate as cathode material in rechargeable Li-ion batteries which shows antiferromagnetic ordering below the Néel temperature. Recently, the Mn-doped LiFePO_4 have been investigated to improve electrochemical performance of LiFePO_4 batteries. We have measured Raman spectra of $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$ ($x=0, 0.3, 0.5$) at low temperatures, and studied the temperature dependence of the various phonon modes. From our Raman studies of $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, we focused on analyzing structural changes in Energy. Here, we have completely assigned the symmetries of the 9 Raman modes observed, as expected from a group theoretical analysis. These Raman modes have been classified into several groups according to temperature dependence of the modes. Two PO_4^{3-} external vibrational modes have been identified by their strong temperature dependence of the Raman wavenumbers, while other modes could be classified as internal vibrational modes due to their weak temperature dependence. Our Raman studies clearly show that Mn-doping in LiFePO_4 increases the correlation between the internal and external modes. Some of modes which are affected by Mn-doping have also been identified in the temperature dependence. The temperature dependence of the 632 cm^{-1}, 952 cm^{-1}, 1072 cm^{-1} modes displayed an anomalous behavior below the magnetic transition temperature (Néel temperature). Comparing that with the result of magnetic measurement, we could suggest that the partial replacement of Fe by Mn in $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$ affect the behavior of some particular phonon modes through the spin-phonon</p>