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Magnetic Materials Laboratory

Research Field

Magnetism
Nanomaterials

Education

Ph. D., Physics, National Cheng Kung University,
R.O.C.(Taiwan)

Publications

1.1 Journal Papers

- 1.1.1 V.A. Zayakhanov, S.S. Starchikov, M.V. Lyubutina, Chun-Rong Lin*, Ying-Zhen Chen, Bing-Yi Chen, A.L. Vasiliev, I.S. Lyubutin, (2023, Nov). Phase composition, structural and magnetic properties of core-shell nanoparticles based on iron carbide Fe_3C synthesized by the sol-gel method
- 1.1.2 Jiann-Shing Lee, Shih-Min Hung, Chun-Rong Lin, Chi-Liang Chen, Jau-Wern Chiou, Chih-Yu Hua, Huang-Ming Tsai, Way-Faung Pong, Chien-Te Chen, Wen-Bin Wu*, and Jiunn Chen*, (2023, Aug). Polarized Hole Injection-induced Magnetic Enhancement in Carbon-Encapsulated Cobalt Ferrite Nanoparticles
- 1.1.3 Aleksandr A. Spivakov, Li-Huai Huang, Ying-Zhen Chen, Chun-Rong Lin*, (2023, Jul). Facile Synthesis of Chromium-Doped $\text{Fe}_{1.1}\text{Mn}_{1.9}\text{O}_4$ Nanoparticles and the Effect of Cr Content on Their Magnetic and Structural Properties
- 1.1.4 Aleksandr A. Spivakov, Chun-Rong Lin*, Ying-Zhen Chen, Li-Huai Huang, (2023, Apr). Temperature-induced irreversible structural transition in $\text{Fe}_{1.1}\text{Mn}_{1.9}\text{O}_4$ nanoparticles synthesized by combustion method
- 1.1.5 Oxana S. Ivanova*, Irina S. Edelman, Chun-Rong Lin*, Evgeniy S. Svetlitsky, Alexey E. Sokolov, Kirill A. Lukyanenko, Alexander L. Sukhachev, Nikolay P. Shestakov, Ying-Zhen Chen, Aleksandr A. Spivakov, (2022, Dec). Core-Shell $\text{Fe}_3\text{O}_4@\text{C}$ Nanoparticles for the Organic Dye Adsorption and Targeted Magneto-Mechanical Destruction of Ehrlich Ascites Carcinoma Cells
- 1.1.6 O. S. Ivanova, I. S. Edelman, A. E. Sokolov, E. S. Svetlitsky, S. M. Zharkov, A. L. Sukhachev, Ch. R. Lin, Yu. Zh. Chen, (2022, Nov). Adsorption of organic dyes by $\text{Fe}_3\text{O}_4@\text{c}$, $\text{Fe}_3\text{O}_4@\text{c}@\text{c}$, $\text{Fe}_3\text{O}_4@\text{SiO}_2$ magnetic nanoparticles

- 1.1.7. Irina S. Edelman, Ruslan D. Ivantsov*, Chun-Rong Lin*, Sergey M. Zharkov, Dmitry A. Velikanov, Maxim S. Molokeev, Galina M. Zeer, Ying-Zhen Chen, Aleksandr A. Spivakov, (2022, Oct). Evolution of morphology and magnetic properties of α -Fe_{2-x}Cr_xO₃ nanoparticles in dependence on Cr concentration
- 1.1.8. R. D. Ivantsov*, C.-R. Lin*, Y.-Z. Chen, O. S. Ivanova, R. R. Altunin, Yu. V. Knyazev, M. S. Molokeev, S. M. Zharkov, N. P. Shestakov, A. L. Sukhachev, and I. S. Edelman, (2022, Aug). Effect of Surfactants on the Structure, Phase Composition, and Magnetic Properties of Fe_xS_y Nanoparticles Synthesized by Thermal Decomposition
- 1.2 Conference Papers
- 1.2.1 Chun-Rong Lin*, Ying-Zhen Chen, Kuan-Ting He, “Synthesis and Characterization of the Sodium-Doped Lithium Spinel Ferrite Nanoparticles”, Materials Research Society of Japan (MRS-J) /International Union of Materials Research Societies (IUMRS) (MRM2023/IUMRS-ICA2023), Kyoto, Japan (2023/12/11~16)
- 1.2.2 Wen-Jing Chen*, Yu-Qi Feng, Li-Huai Huang, Zhen-Jia Yu, Yu-Huei Lin, You-Rong Zhong, Xin-Yi Ye, Chien-Chih Chen, Chun-Rong Lin*, “Structural evolution and magnetic properties of metal-organic framework MIL-100(Co, Fe) annealed in an inert gas”, International Symposium on Precision Engineering 2023 (ISPE 2023), Hsinhua Forest Station, Tainan City, Taiwan (2023/11/10~11)
- 1.2.3 Yu-Huei Lin*, Yu-Qi Feng, Wen-Jing Chen, Li-Huai Huang, Zhen-Jia Yu, You-Rong Zhong, Xin-Yi Ye, Chien-Chih Chen, Chun-Rong Lin*, “Tuning in structure and magnetic behavior of sodium-doped spinel iron-manganese oxide nano powders”, International Symposium on Precision Engineering 2023 (ISPE 2023), Hsinhua Forest Station, Tainan City, Taiwan (2023/11/10~11)
- 1.2.4 Wen-Jing Chen*, Yu-Qi Feng, Chun-Rong Lin*, Ying-Zhen Chen*, “Synthesis and characterization of carbonized nanomaterials based on metal-organic framework MIL-100(Co, Fe)”, 2023 International Symposium on Novel and Sustainable Technology (ISNST 2023), Tainan City, Taiwan (2023/10/19~20)
- 1.2.5 Yu-Huei Lin*, Zhen-Jia Yu, Yu-Qi Feng, Chun-Rong Lin*, Ying-Zhen Chen*, “Synthesis and characterization of sodium doped Fe_{1.1}Mn_{1.9}O₄ nanoparticles”, 2023 International Symposium on Novel and Sustainable Technology (ISNST 2023), Tainan City, Taiwan (2023/10/19~20)

- 1.2.6 Chun-Rong Lin, Ying-Zhen Chen, Kun-Yauh Shi, “Synthesis and characterization of carbonized nanomaterials based on metal-organic framework MIL-100(Fe)”, 6th EuChemS Inorganic Chemistry Conference 2023 (EICC-6), Vienna, Austria (2023/09/03~07) & The 2023 IEEE International Conference “Nanomaterials: Applications & Properties” (IEEE NAP-2023), Bratislava, Slovakia (2023/09/10~15)
- 1.2.7 L. Huang, Y. Chen, Z. Huang, P. Chuang, A. Spivakov, C. Lin, “Structural Phase Transformation and Magnetic Properties Induced by Thermal Analysis with Different Gaseous Environments in Iron-Doped Manganese Oxide Nanoparticles”,
- 1.2.8 P. Chuang, B. Chen, L. Huang, Z. Huang, Y. Chen, B. Xie, A. Spivakov, C. Lin, “Facile Synthesis of Carbon-Encapsulated Fe/Fe₃C Nanocomposite Particles and Their Magnetic Behavior”,

Academic Projects

2.1 MOST Projects(In recent years)

2.1.1 Principal investigator - Chun-Rong Lin

General research project:

- 2.1.1.1 Magneto-plasmonic effect in spinel nanoparticles capsulated in carbon and noble metal shells. (MOST 106-2112-M-153-001-MY3 ; Execution duration : 2017/08/01 ~ 2020/07/31(Additional period : 2020/12/31))
- 2.1.1.2 Electronic transport, magneto-optical and Mössbauer spectroscopy of monodisperse self-assembled cobalt-doped iron-manganite spinel nanoparticle arrays (1/3) (MOST 109-2112-M-153-003- ; Execution duration : 2020/08/01 ~ 2021/07/31(Additional period : 2021/12/31))
- 2.1.1.3 Electronic transport, magneto-optical and Mössbauer spectroscopy of monodisperse self-assembled cobalt-doped iron-manganite spinel nanoparticle arrays (2/3) (MOST 110-2112-M-153-005- ; Execution duration : 2021/08/01 ~ 2022/07/31(Additional period : 2022/12/31))
- 2.1.1.4 Electronic transport, magneto-optical and Mössbauer spectroscopy of monodisperse self-assembled cobalt-doped iron-manganite spinel nanoparticle arrays (3/3) (MOST 111-2112-M-153-003- ; Execution duration : 2022/08/01 ~ 2023/07/31)

2.1.2 Postdoctoral research :

Aleksandr Spivakov

2.1.2.1 MOST 106-2811-M-153-002- ; Execution duration : 2018/02/01 ~ 2018/09/30

2.1.2.2 MOST 107-2811-M-153-500- ; Execution duration : 2018/10/01 ~ 2019/07/31

2.1.2.3 MOST 108-2811-M-153-500- ; Execution duration : 2019/08/01 ~ 2020/07/31

2.1.2.4 MOST 109-2811-M-153-500- ; Execution duration : 2020/08/01 ~ 2021/07/31

2.1.2.5 MOST 110-2811-M-153-001 ; Execution duration : 2021/08/01 ~ 2022/07/31

2.1.2.5 MOST 111-2811-M-153-001 ; Execution duration : 2022/08/01 ~ 2023/07/31

2.1.3 Taiwan-Russian MOST cooperation (add-on) project :

2.1.3.1 Multifunctional materials based on core-shell magnetic nanoparticles and magnetic nanoparticles/polymer nanocomposites. (MOST 108-2923-M-153-001-MY3 ; Execution duration : 2019/01/01 ~ 2021/12/31(Additionalperiod : 2023/12/31))

Updated:2024/02/07