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NAME: *Naeem Ahmad*

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DATE A OF BIRTH: *4th April. 1980*

NATIONALITY: *Pakistan*

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CURRENT STATUS: *Professor (Tenured-TTS)*

DATE OF JOINING: *June 2011-Till continued*

PRESENT ADDRESS: *Spintronics Laboratory, Department of Physics, Faculty of Basic and Sciences,
International Islamic University, Islamabad 44000, Pakistan*



1. EDUCATION

- (1) 2007-2011: Ph. D (Condensed matter Physics).
Institute of Physics, Chinese Academy of Sciences (CAS), Beijing, China,
Advisor: Prof. Xiufeng Han
- (2) 2003- 2005: MSc, (Laser Induced Plasma)
University of Engineering and Technology, Lahore, Pakistan

2. EXPERIMENTAL SKILLS

- (1) Synthesis of nanomaterials by various techniques like coprecipitation, hydrothermal and electrodeposition
- (2) Preparations of photoanode and counter electrodes using nanomaterials
- (3) Device making of dye-sensitized solar cells and perovskite solar cells
- (4) Thin film deposition using DC/ RF magnetron sputtering system;
- (5) Micro/nano fabrication including optical (UV) lithography, electron-beam lithography (EBL), focused ion beam (FIB), ion-beam etching (IBE), reactive ion etching (RIE)
- (6) Structure/surface characterization using XRD, SEM, FMR, AFM, MFM and MOKE;
- (7) An Extensive Experience in fabrication of ferromagnetic nanowires and nanotubes by electrodeposition method
- (8) Magnetic characterization by VSM, SQUID magnetometer and Spin-dependent transport analysis by PPMS

3. RESEARCH INTERESTS

- (1) Machine Learning using Artificial Intelligence to predict various properties of solar cells like efficiencies and suitable perovskite materials
- (2) Dye-sensitized solar cells
- (3) Synthesis of nanomaterials based photoanodes and counter electrodes
- (4) Synthesis of different natural and artificial dyes to use in DSSCs
- (5) Next generation Perovskite solar cells
- (6) Synthesis of different perovskite nanomaterials like CsPbI₃, CsSnI₃ and doping effects
- (7) Design, fabrication and application of magnetic nanostructures, including giant magnetoresistance (GMR), magnetic tunnel junctions (MTJs) and other spintronic materials;
- (8) Spin-polarized transport in magnetic nanostructures;
- (9) Design and fabrication of magnetic random access memory, magnetic sensors and other spintronics

devices based magnetic nanostructures.

- (10) Magnetization Reversal mechanism in ferromagnetic nanowires and nanotubes
- (11) Magnetization reversal mechanism study to use in high density recording media
- (12) Nanomaterials based dye sensitized solar cells

4. AWARDS/Achievements

- (1) Publication Editor, Journal of Applied Physics, for Conference proceedings of the 56th Annual Conference on Magnetism and Magnetic Materials, Arizona USA (2011).
- (2) Overseas Scholarship 2007-2011 for PhD by Higher Education Commission, Pakistan.
- (3) 1ST Position in 2003-2005 in Master of Science, University of Engineering and Technology, Lahore, Pakistan.
- (4) 1st Position in 1996 in Metric Govt. High School, Arifwala, Pakpattan
- (5) Principal Investigator of the Project "Fabrication and characterization of innovative nanomaterials" funded by Higher Education Commission, Pakistan
- (6) Win highly competitive Travel Grants five times to participate in research conferences in countries like USA, Turkey and China

5. Research Projects

1-Funding Agency : Higher Education Commission of Pakistan

Project Number = No: PM-IPFP/HRD/HEC/2011/354

Title = Fabrication, Characterization & FMR study of ferromagnetic nanowires & nanotubes.

Role = Principle Investigator

Project Funding = 0.5 million PRPs

2-Funding Agency : Higher Education Commission of Pakistan

Project Number = No: PM-IPFP/HRD/HEC/2014/562

Title = Electrical and optical Characterization of organic photovoltaic devices

Role = Co Principle Investigator

Project Funding = 0.5 million PRPs

3-Funding Agency : Higher Education Commission of Pakistan

Project Number = 20-4861

Title = Synthesis and characterization of Graphene based nanocomposites

Role = Co PI

Project Funding = 15.467 million PRPs

6. PUBLICATION LIST (Cumulative Impact Factor > 200)

Research papers published in 2025

1. Reduction of tungsten trap sites by synthesizing ternary WO₃/TiO₂/ZnO nanocomposite as an alternative of WO₃ nanoparticles for the application of DSSC
Muhammad Musharaf, Muhammad Usman, **Naeem Ahmed**, Ahmed Shuja
Ceramics International, 173 (2025) 108154, **IF=5.5**
2. Effect of indium doped ZnO with PANI hybrid nanocomposite for efficient photoanode in DSSC
Muhammad Musharaf, **Naeem Ahmed**, Ahmed Shuja, Abdul Majid, Javed Iqbal, Khalid Javed

- Solar Energy 301 (2025) 113957, **I.F=6.6**
3. Uncovering the potential of two-dimensional SrRuO₃ as anode material in Li, Na, Mg, Ca, K, and Zn ion batteries: First-principles investigations of structural, electronic and electrochemical properties
Abdul Majida, Sawaira Tasawara, Hafsa Razaa, Kamran Alamb, Sajjad Haider, **Naeem Ahmad**
Journal of Energy Storage, 105 (2025) 114634, **I.F=9.5**
 4. A First-Principles Study on Vibrational and Optical Properties of Molecular Cages Sb₄O₆, P₄Se₃ and P₄O₆
Nimra Zaib Raza, Abdul Majid, Naeem Ahmad, Sajjad Haider, Kamran Alam, Salahuddin Khan
Journal of Inorganic and Organometallic Polymers and Materials (2025), **I.F=4.9**
<https://doi.org/10.1007/s10904-024-03531-4>
 5. High conductivity and a large specific surface area triggered electrochemical properties of MnFe₂O₄-CNTs nanocomposites for energy storage applications
Hamza Nawaz, Javed Iqbal, Sobia Jabeen, M. Imran Shahzad, Naeem Ahmad
Journal of Alloys and Compounds 1031(2024) 180773, **I.F=6.37**
 6. First principles investigations on structural, electronic, optical, and thermodynamical properties of bulk and surfaces of In₂CO
Hira Batool, Abdul Majid, Abdul Manan, Naeem Ahmed, Sajjad Haider, Kamran Alam
Materials Science in Semiconductor Processing 186 (2025) 109092, **I.F=4.6**
 7. High performance α -Fe₂O₃/rGO based prototype asymmetric coin cell supercapacitor in hybrid electrolyte
Shakeel Abbas, Tanveer Hussain Bokhari, Mudassir Abbas, Zahid Abbas, Naeem Ahmad, Amjad Nisar, Mashkoor Ahmad
Electrochimica Acta 517 (2025) 145761, **I.F=5.6**

Research papers published in 2011-2024

8. Magnetoelastic anisotropy induced effects on field and temperature dependent magnetization reversal of Ni nanowires and nanotubes.
Naeem Ahmad, J. Y. Chen, W. P. Zhou, D P Liu, X F Han,* Journal of Superconductivity and Novel Magnetism **24**, 785-792 (2011) **I.F=1.14**.
9. Temperature dependent magnetic properties of Co nanowires and nanotubes fabricated by electrodeposition method. Journal of Applied Physics **109**, 07A331 (2011) **I.F=2.32**.
Naeem Ahmad, J.Y. Chen, Javed Iqbal, W. X. Wang, W. P. Zhou, and X. F. Han*
10. Room-temperature spin glass and near band edge (NBE) properties of highly disorder (FeCo)_{0.03}Zn_{0.97}O and (FeCoNi)_{0.03}Zn_{0.97}O nanorods" Journal of Applied Physics **107**, 043902 (2010) **I.F=2.32**.
Javed Iqbal, Xiaofang Liu, **Naeem Ahmad**, Takashi Harumoto, Dapeng Yu, Ronghai Yu.
11. Effect of external magnetic field on magnetic properties of Co-Pt nanotubes and nanowires.
Journal of Applied Physics **109**, 07E157 (2011) **I.F=2.32**.
Jun-Yang Chen, Hai-Rui Liu, **Naeem Ahmad**, Y. L. Li, W. P. Zhou and Xiu-Feng Han*
12. Synthesis and magnetic characterization of Co-NiO-Ni core-shell nanotube arrays
J.Y. Chen, **Naeem Ahmad**, D.W. Shi, W. P. Zhou, and Xiu-Feng Han*

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- Journal of Applied Physics **110**, 073912 (2011) **I.F=2.32**.
- 13.** Magnetization and magnetic anisotropy of Co/Cu Multilayer Nanowires
Naeem Ahmad, J. Y. Chen, D. W. Shi, Javed Iqbal, X. F. Han,*
Journal of Applied Physics, **111**, 07C119 (2012) **I.F=2.32**.
- 14.** Synthesis and Characterization of Silver Doped Cadmium Oxide Nanoparticles
Abdul Majid, Zeba Afzal, Shehzad Murtaza, Ghulam nabi and **Naeem Ahmad**
Journal of Advanced Physics, **02**, 1-3 (2013) **I.F=1.5**.
- 15.** Fabrication and magnetic properties of La-X (X = Co, Ni, and Fe) nanotubes arrays prepared by electrodeposition methods
J. Y. Chen, D. W. Shi, **N. Ahmad**, D. P. Liu, W. P. Zhou and X.F. Han,
Journal of Applied Physics **114**, 054303 (2013) **I.F=2.32**
- 16.** Synthesis as well as Raman and optical properties of Cu-doped ZnO nanorods prepared at low temperature
Javed Iqbal, Tariq Jan, M. Shafiq, Aqsa Arshad, **Naeem Ahmad**, Saeed Badshah, Ronghai Yu
Ceramics International **40**, 2091(2014) **I.F=3.45**
- 17.** Influence of Mg doping level on morphology, optical, electrical properties and antibacterial activity of ZnO nanostructures
Javed Iqbal, Tariq Jan, Muhammad Ismail, **Naeem Ahmad**, Asim Arif, Mohsin Khan, M. Adil, Sami-ul-Haq, Aqsa Arshad
Ceramics International, **40**, 7487 (2014) **I.F=3.45**
- 18.** Carbon Ion-beam-induced Modification in Structural and Electrical Properties of ZnO Nanowires
Javed Iqbal, H. Tabassum, Ishaq Ahmad, Tariq Jan, C.F. Dee, M. Madhuku, A.A. Umar & **N. Ahmad**
Sans Malaysiana, **43**, 283 (2014) **I.F=1**
- 19.** Ion Irradiation effects and magnetization reversal mechanism in $(\text{Ni}_{80}\text{Fe}_{20})_{1-x}\text{Co}_x$ nanowires and nanotubes
Naeem Ahmad, J. Iqbal, J. Y. Chen, Asim Hussain, D.W. Shi, X. F. Han
Journal of Magnetism and Magnetic Materials, **378**, 546 (2015) **I.F=3.06**
- 20.** AC Potential Dependent Concentration Variation and Domain Wall Pinning in $\text{Co}_{1-x}\text{Zn}_x$ (X=0.4-0.5) Nanorods
Naeem Ahmad, Amna Jaral, Gulbahar Bano, Sidrah Batool, Hira Dilpazir, Muhammad Jameel, Muhammad Suleman, Javed Iqbal, Abdul Majid, M. Moazzam Naseer, Saqlain A. Shah
Journal of Superconductivity and Novel Magnetism, **29**, 509 (2016) **I.F=1.14**
- 21.** First order Raman scattering analysis of transition metal ions implanted GaN
Abdul Majid, Usman Ali Rana, Abdul Shakoor, **Naeem Ahmad**, Najam al Hassan, Salah Ud-Din Khan, Journal of Physics and Chemistry of Solids **90** (2016) 35–39, **I.F=2.75**
- 22.** Doxorubicin-loaded photosensitive magnetic liposomes for multi-modal cancer therapy
Saqlain A. Shah , M.U. Aslam Khan , M. Arshad, S.U. Awan , M.U. Hashmi, **N. Ahmad**

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- Colloids and Surfaces B: Biointerfaces **148** (2016) 157–164, **I.F=3.99**
- 23.** Magnetization reversal and surface spins in electrodeposited Co₉₀Mn₁₀ alloy nanowires
Naeem Ahmad, Sajid Tanweer, Suleman Khan, J. Iqbal, Abdul Majid, Saqlain Shah, M.S. Awan, Muhammad Moazzam Naseer
 Journal of Superconductivity and Novel Magnetism, **30**, 505-509 (2017), **I.F=1.14**
- 24.** Ferromagnetic Relaxation and Magnetic properties of Co₄₀Fe₄₀B₂₀ thin Films
Naeem Ahmad, Tian YU, Suleman Khan, Abdul Majid, Javed Iqbal, S.A. Shah, S.U. Awan, X. F. Han
 Journal of Superconductivity and Novel Magnetism, **30**:469–473 (2017) **I.F=1.14**
- 25.** Influence of voltage variation on structure and magnetic properties of Co_{1-x}Sn_x (X=0.3-0.7)
 Nanowire Alloys in Alumina by electrochemical deposition
Naeem Ahmad, Suleman Khan, M. Arman Iqbal, Muhammad Awaiz, Saqlain A. Shah, Ishfaq Ahmed, Nyla Jabeen, Abdul Majid, Javed Iqbal
 Applied Physics A, **123**, 65 (2017) **I.F=1.78**
- 26.** Enhancement of microwave absorption properties of CuFe₂O₄ nanoparticles embedded in MgO Matrix
 Kashif Ali, Javed Iqbal, Tariq Jan, **Naeem Ahmad**, Ishaq Ahmed, Dongyun Wang
 Journal of Alloys and Compounds, **696**, 711-717 (2017) **I.F=4.17**
- 27.** Structural, Dielectrical and Magnetic properties of SnO₂-CuFeO₄ nanocomposites
 Kashif Ali, Javed Iqbal, Tariq Jan, Dongyun Wang, **Naeem Ahmad**, Ishaq Ahmed, Syed Zafar Ilyas
 Journal of Magnetism and Magnetic Materials, **428**, 417-423 (2017) **I.F=3.06**
- 28.** A DFT study of electronic interactions in Ti:AlN: GGA and GGA + U approaches
 Abdul Majid, Mian Azmat, **Naeem Ahmad**, Fayyaz Hussain, Ghulam Nabi
 Journal of Magnetism and Magnetic Materials, **432**, 351-355 (2017), **I.F=3.06**
- 29.** Effects of Transition Metal ions doping on optical and electronic properties of GaN
 Abdul Majid, **Naeem Ahmad**, Khalid Nadeem, Muhammad Shakil, JianJun Zhu
 Journal of Materials Science: Materials in Electronics, **28**, 10596–10602 (2017), **I.F=2.32**
- 30.** Potential dependent Tuning of magnetic and structural properties of electrodeposited NiZn nanowires in Al₂O₃ templates
Naeem Ahmad, Suleman Khan, W. J. Li, Muhammad Saddique, Saqlain A. Shah, Javed Iqbal, Abdul Majid, X. F. Han
 Journal of Magnetism and Magnetic Materials, **441**, 696–701 (2017) **I.F=3.06**
- 31.** Investigation of easy axis transition and magnetodynamics in Ni₇₆Fe₂₄ Nanowires and Ni₇₇Fe₂₃ Nanotubes synthesized by DC electrodeposition
Naeem Ahmad, Ahmad Saeed, Suleman Khan, Fahad Hassan, W. J. Li, Saqlain A. Shah, Abdul Majid, X. F. Han
 Journal of Alloys and Compounds, **725**, 123-128 (2017) **I.F=4.17**

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- 32.** Effects of Mn ion implantation on XPS spectroscopy of GaN thin films

Abdul Majid, **Naeem Ahmad**, Muhammad Rizwan, Salah Ud-Din Khan, Fekri Abdulraqeb, Ahmed Ali, Jianjun Zhu

Journal of Electronic Materials, **47**,1555 (2018) **I.F. =1.57**
 - 33.** A computational Study of Ferromagnetic Exchange Interactions and Charge Transfer in Codoped Gallium Nitride

Abdul Majid, **Naeem Ahmad**, Tahir Iqbal Awan, Mehreen Javed

J Supercond Nov Magn, **31**,475–481 (2018), **I.F=1.14**
 - 34.** Mobility and perpendicular magnetic anisotropy in Electrodeposited $\text{Co}_{32}\text{Fe}_{67}\text{B}_1$ thin films using boric acid as boron source

Naeem Ahmad, Fahad Hassan, Suleman Khan, Abdul Majid, Affan Safeer, Ahmad Saeed, Imran Murtaza, S.Syed, X.F. Han

Journal of Magnetism and Magnetic Materials,**458**, 156-163 (2018), **I.F=3.06**
 - 35.** Analysis of electronic, magnetic and half-metallic properties of L_{21} -type ($\text{Co}_2\text{Mn}_{0.5}\text{Fe}_{0.5}\text{Sn}$) nanowires in AAO templates using AC-electrodeposition

Suleman khan, **Naeem Ahmed**, Nisar Ahmad, X.F. Han

Journal of Magnetism and Magnetic Materials,**460**, 120-127 (2018) **I.F=3.06**
 - 36.**Structural, Magnetic and Transport Properties of Fe-based Full Heusler alloy Fe_2CoSn Nanowires Prepared by Template-based Electrodeposition

Suleman khan, **Naeem Ahmad**, Nisar Ahmed, Affan Safeer

Journal of Magnetism and Magnetic Materials, **465**, 462-470 (2018) **I.F=3.06**
 - 37.**Correlation between structural, electrical, dielectric and magnetic properties of semiconducting Co doped and (Co, Li) co-doped ZnO nanoparticles for Spintronics applications

Saif Ullah Awan, Zahid Mehmood, Shahzad Hussain, Saqlain A. Shah, **Naeem Ahmad**, Mohsin Rafique,M. Aftab, Turab Ali Abbas

Physica E, **103**,110-121 (2018), **I.F=3.17**
 - 38.**Compositional dependent morphology, structural and magnetic properties of $\text{Fe}_{100-x}\text{Cu}_x$ alloy nanowires via electrodeposition in AAO templates

Suleman Khan, **Naeem Ahmad**, Affan Safeer, Javed Iqbal

Applied Physics A, **124**, 678 (2018), **I.F=1.78**
 - 39.**Humidity dependent impedance response of graphene/carbon nanotubes composite

Adil Nawab, Imran Murtaza*, Khasan S. karimov, **Naeem Ahmad**, Muhammad Sajjad

Materials Research Express, **5**, 9 (2018) **I.F=1.44**
 - 40.**Voltage Dependent Physical and Magnetic properties of electrodeposited $\text{Co}_{1-x}\text{Mn}_x$ alloy nanowires

Muhammad Awais, **Naeem Ahmad**, Suleman Khan, Affan Safeer, Khalid Javed, Imran Murtaza, Abdul Majid

Journal of Magnetism and Magnetic Materials, **474** (2019) 207–214, **I.F=3.01**

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41. Magnetization Behavior of Electrochemically Synthesized Co_2MnSn full Heusler alloy Nanowire Arrays
Affan Safeer, **Naeem Ahmad**, Suleman Khan, Liaqat Ali Azam, Danyal Bashir
Journal of Applied Physics **125**, 034302 (2019), **I.F.=2.32**
 42. Fabrication and comparison of Dye-sensitized solar cells by using TiO_2 and ZnO as photo electrode
Aneel Pervez, Khalid Javed, Zafar Iqbal, Monas Shahzad, Usman Khan, Hamid Latif, Saqlain Abbas Shah, **Naeem Ahmad**
Optik - International Journal for Light and Electron Optics **182** (2019) 175–180, **I.F.=1.19**
 43. A review on transition metal doped silicon carbide
Abdul Majid, Naema Rania, Muhammad Faheem Malik, **Naeem Ahmad**, Najam-al-Hassan, Fayyaz Hussaine, Abdul Shakoor, Ceramics International, **45**, 8089-8080 (2019) **I.F.=3.45**
 44. Fabrication and characterization of YIG nanotubes
X.M. Zhang, W. J. Li, M. Irfan, S. Parajuli, J. W. Wei, Z. R. Yan, X. Wang, **Naeem Ahmad**, J. F. Feng, G.Q. Yu, X. F. Han, Journal of Magnetism and Magnetic Materials, **482**, 358-363(2019) **I.F.=3.01**
 45. Increasing the power factor by Sb doped TlSbTeIn Chalcogenide System
Waqas Khan, Wiqar Hussain Shah, Sufaid Shah, Sabir Khan, Waqar Adil Syed, **Naeem Ahmad**
Chalcogenide Letters, **16**, 343 - 349 (2019), **I.F.=0.78**
 46. Enhancement of power factor by Sn doping in $\text{Tl}_8\text{Sb}_{2-x}\text{Sn}_x\text{Te}_6$ nano-chalcogenide system,
Chalcogenide Letters, **16**, 395 - 403 (2019), **I.F.=0.78**
 47. Study of structural and uniaxial magnetic anisotropy of $\text{Co}_{1-x}\text{Mg}_x$ ($x=0.1-0.25$) nanowires in Alumina templates
Naeem Ahmad, Abdul Majid, Saira Parveen, Wiqar Hussain Shah, Faryal Mughal, Suleman Khan Imran Murtaza
Journal of Superconductivity and Novel Magnetism, **33**, 809-815 (2020), **I.F.=1.14**
 48. Magnetization behavior of NiMnGa alloy nanowires prepared by DC electrodeposition
K. Javed, X.M. Zhang, S. Parajuli, S.S. Ali, **N. Ahmad**, S.A. Shah, M. Irfan, J.F. Feng, X.F. Han
Journal of Magnetism and Magnetic Materials, **498**, 166232 (2020), **I.F.=3.01**,
 49. A two-step fabrication and characterization of 1D hybrid ferromagnetic multiferroic $\text{Ni-BiFe}_{1-x}\text{Co}_x\text{O}_3$ core-shell nanostructures
K. Javed, X.M. Zhang, S. Parajuli, S.S. Ali, **Naeem Ahmad**, M. Irfan, J.F. Feng, X.F. Han
Journal of Magnetism and Magnetic Materials, **493**, 165738 (2020), **I.F.=3.01**
 50. Effect of Mn (12 at%) substitution on magnetic anisotropy and magnetization reversal of equiatomic FeCo alloy nanorod arrays
Affan Safeer, Liaqat Ali Azam, Danyal Bashir, Suleman Khan, Bushra Parveen, **Naeem Ahmad**, Physica B, **586**, 412138 (2020), **IF=1.90**

51. Electrospun PVA/TiC Nanofibers for High Performance Capacitive Humidity Sensing
Sadaf Mazhar, Awais Ali Qarnic, Yasir UlHaq Zeeshan ulHaq, Imran Murtaza, **Naeem Ahmad**
Nida Jabeen, Shahid Amin, Microchemical Journal, **157**, 104974 (2020)
52. Dominance of shape anisotropy among magnetostatic interaction and magnetocrystalline anisotropy in electrodeposited (FeCo)_{1-x}Cu_x (X=0.1-0.5) Ternary Alloy Nanowires
Naeem Ahmad, M. Zahid Shafiq, Suleman Khan, Wiqar Hussain Shah, Imran Murtaza, Abdul Majid, Khalid Javed
Journal of Superconductivity and Novel Magnetism, **33**, 1495-1505 (2020) **I.F=1.14**
53. Ul Haq Y, Murtaza I, Mazhar S, **Naeem Ahmad** et al.
Investigation of improved dielectric and thermal properties of ternary nanocomposite PMMA/MXene/ZnO fabricated by in-situ bulk polymerization
Journal of Applied Polymer Science. 2020; e49197. <https://doi.org/10.1002/app.49197>, **I.F=2.18**
54. TD-DFT investigations on structural modification in Carbazole based organic Photosensitizers to improve electron injection in DSSC
Abdul Majid, Maryam Sana, Salah Khan, Zeyad Almutairi, **Naeem Ahmad**, International Journal of Quantum Chemistry, **120**, e26253 (2020), <https://doi.org/10.22541/au.157849582.23621558>, **I.F=2.26**
55. Magnetic, Electronic and Structural investigations of Fe_{1-x}Mn_x (0.01 ≤ x ≤ 0.04) alloy Nanowires via Electrodeposition in AAO templates
Suleman khan, **Naeem Ahmad**, Affan Safeer, Sumaira Zareen, Ather Hassan, Javed Iqbal
Solid State Sciences, **107**, 106351 (2020), **I.F=2.43**, **ISSN: 1293-2558**
56. Green Fabricated Zinc Oxide Nanoformulated Media Enhanced Callus Induction and Regeneration Dynamics of Panicum virgatum
L. Saima Shafique, Nyla Jabeen, Khawaja Shafique Ahmad, Samra Irum, Sadaf Anwaar, **Naeem Ahmad**, Sadia Alam, Muhammad Ilyas, Talha Farooq Khan, Syed Zaheer Hussain
PLOS One, **15** (7), e0230464 (2020) doi: <https://doi.org/10.1101/2020.03.03.974675>, **I.F=2.76**
57. Magnetic hardening and exchange bias effect in dual-phase Co₃Mn nanowire arrays
Liaqat Ali Azam, Afan Safeer, **Naeem Ahmed**, Andrés Rosales-Rivera, Suleman Khan, Imran Murtaza Applied Physics A, **127**, 398 (2021), **I.F=1.81**
58. Enhanced starch hydrolysis by α-amylase using copper oxide nanowires
Khurshid Ahmad, Suleman Khan, Muhammad Talha Yasin, Saddam Hussain, Rasheed Ahmad, **Naeem Ahmad**, Muzzamil Ahmed, Abdul Ghani, Muhammad Faheem, Hanif Ullah, Adil Hussain, Syed Ali Imran Bokhari
Applied Nanoscience, **11**, 2059–2071 (2021), **I.F=3.67**
59. Fluorene substituted thieno[3, 2-b]thiophene – a new electrochromic conjugated polymer
Mubashir Shah, Imran Murtaza, Rehan Abid, Ahmed Shuja, Hong Meng, **Naeem Ahmed**
Journal of Polymer Research (2021) **28**: 397, **I.F=3.07**
60. Synthesis of ZnO/CNT Nanocomposites for Ultraviolet sensor
Maryam Basit, Murrawat Abbas, Naeem Ahmad, Sofia Javed and Nazar Abbas Shah

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- Frontiers in Materials, **9**, 835521 (2022), doi: 10.3389/fmats.2022.835521, **I.F=3.51**
- 61.** Silver Nanowires/Polypyrrole Nanostructured Composite as an Alternative Electrocatalytic material for Dye-Sensitized Solar Cells
Muhammad Afzal, **Naeem Ahmad**,* Muhammad Shahid Khan, Hamza Shahid, Imran Murtaza, Nazar Abbas, Khalid Javed, Adnan Gulab, Suleman Khan
Optik, **268**, 169734 (2022), **I.F=2.84**
- 62.** Improvement in stability and exploring the photovoltaic properties of CsPbI₂Br thin films for perovskite solar cells
Zameer Haider, Aashir Farooq, Muhammad Tayyab, Muhammad Musharaf, **Naeem Ahmed**, Abdul Majid, Khalid Javed
Journal of Alloys and Compounds **989** (2024) 174170, **I.F=6.37**
- 63.** Synergistic Effects and Characterization of CoMn₂O₄/Graphene in DSSC Electrodes
Muhammad Shahid Khan, Farasat Haider, Adnan Majeed, Muhammad Musharaf, **Naeem Ahmed**
Abdul Majid, Khalid Javed, Mashkooor Ahmed
Journal of Electronic Materials (2024) 53:6850–6862, **I.F=2.2**
- 64.** First principles study of structural and electronic properties of Ce substituted Ti₂O₃ slabs with compositions Ti_xCe_{4-x}O₆ where x = 0, 1, 2, 3, 4
Abdul Majid, Rushba Zulfiqar, **Naeem ahmad**, Sajjad Haider, Kamran Alam, Najam Al Hassan
Materials Science in Semiconductor Processing **180** (2024) 108566, **I.F=4.2**
- 65.** Temperature dependent structural and magnetic properties of permalloy (Ni₈₀Fe₂₀) nanotubes
S. Parajuli, K. Javed, M. Irfan, X.M. Zhang, C. Cheng, T. Yu, **N. Ahmed**, J.F. Feng, X.F. Han,*
Journal of Magnetism and Magnetic Materials **602** (2024) 172204, **I.F=2.5**
- 66.** Tuning electrocatalytic activity of Co₃O₄ nanosheets using CdS nanoparticles for highly sensitive non-enzymatic cholesterol biosensor
Hamza Waleed, Haroon Ur Rasheed, Amjad Nisar, Amina Zafar, Yanguo Liu, Shafqat Karim, Yanlong Yu, Hongyu Sun, Shafqat Hussain, Yasir Faiz, Tahir Ali, Amna Safdar, **Naeem Ahmed**, Faisal Faiz, Mashkooor Ahmad
Materials Science in Semiconductor Processing **173** (2024) 108154, **I.F=4.2**

7. CONFERENCE LIST

International Conferences

- 1-** Structural and magnetic properties of ferromagnetic Nanowires and Nanotubes
Naeem Ahmad (oral speaker), J.Y. Chen, Shamaila Shehzadi, W.P Zhou, D.P.Liu, X F Han,*
International Conference on Superconductivity and Magnetism April 25-30,2010
Antalya, Turkey
- 2-** Magnetization reversal in Ni nanowires and nanotubes
Naeem Ahmad (Oral Speaker), J Y Chen, X F Han,*
International Conference on Magnetic Materials June 1-4,2010, Ningbo,P.R.China
- 3-** Structural and magnetic properties of ferromagnetic Ni and Co nanowires and nanotubes.

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- Naeem Ahmad (Poster Presentation), J Y Chen, X F Han,***
The 7th Pacific Rim International Conference on Advanced Materials and Processing 1-5 August
2010 Cairns Convention Centre, Cairns, Australia.
- 4- Magnetic characterization of ferromagnetic nanowires and nanotubes**
Naeem Ahmad (Oral Speaker), J Y Chen, X F Han,*
In IEEE Magnetic society, Beijing Chapter July 23-26,2010 Inner Mongoliya, China.
- 5- Magnetic Characterization of Co nanowires and nanotubes fabricated by electrodeposition method**
Naeem Ahmad (Oral Speaker), J Y Chen, X F Han,* in 55th MMM Conference Nov 14-18,2010,
Atlanta, USA.
- 6- Magnetization reversal and change of magnetic anisotropy in Co/Cu Multilayers Nanowires with
crossed configuration**
Naeem Ahmad (Oral Speaker), J Y Chen, D.W. Shi, J. Iqbal, X F Han,* in 56th MMM Conference
Oct 30-Nov 3,2011, Scottsdale, Arizona, USA
- 7- Ion Irradiation effects and magnetization reversal mechanism in $(\text{Ni}_{80}\text{Fe}_{20})_{1-x}\text{Co}_x$ nanowires and
nanotubes**
Naeem Ahmad (Oral Speaker), Asim Hussain, Chen Chunyang, J. Iqbal, Han Xiufeng*
in 12th Joint Intermag/MMM Conference January 14-18,2013, Chicago, Illinois, USA
- 8- Magnetization reversal and magnetic anisotropy in $\text{Fe}_{90}\text{Pt}_{10}/\text{Fe}_{90}\text{Pd}_{10}$ nanowires and nanotubes**
Naeem Ahmad (Oral Speaker), Chen Chunyang, J. Iqbal, Han Xiufeng*
in 12th Joint Intermag/MMM Conference January 14-18,2013, Chicago, Illinois, USA
- 9- Antiferromagnetic Order and Neel Temperature in $\text{Co}_{1-x}\text{Mn}_x$ ($x=0-1$) alloy nanostructures.**
Naeem Ahmad (Oral Speaker), Javed Iqbal, J.Y. Chen, X.F. Han
59th MMM Conference November 3-7, 2014, Honolulu, Hawaii, USA
- 10- Ferromagnetic Damping and Two Magnon Scattering in $\text{Co}_{40}\text{Fe}_{40}\text{B}_{20}$ thin Films**
Naeem Ahmad (Oral Speaker), J.Y. Chen, Javed Iqbal, Abdul Majid, Saqlain Shah, X. F. Han
Joint MMM/Intermag Conference January 11-15, 2016, San Diego, California, USA
- 11- Potential dependent Tuning of magnetic and structural properties of electrodeposited NiZn nanowires
in Al_2O_3 templates**
**Naeem Ahmad (Oral Speaker), Saddique Ghumen, Suleman Khan, Javed Iqbal, Abdul Majid, Saqlain
Shah, X. F. Han**
61st Annual Conference on Magnetism and Magnetic Materials, October 31 – November
4, 2016, New Orleans, Louisiana, USA
- 12- DFT calculations and effect of voltage variation for synthesis of full Heusler alloy Fe_2CoSn nanowires
using AC-electrodeposition in Alumina templates**

Suleman khan, Naeem ahmad, X.F.Han

62nd Annual Conference on Magnetism and Magnetic Materials, November 6 –10 , 2017,

Pittsberg, Pennsylviaia, USA

- 13-** Dominance of shape anisotropy among magnetostatic interaction and Magnetocrystalline anisotropy in electrodeposited $(\text{FeCo})_{1-x}\text{Cu}_x$ ($x=0.1-0.5$) Ternary Alloy Nanowires

Naeem Ahmad, M. Zahid Shafiq, Suleman Khan, R. Sharif, Affan Safeer, Abdul Majid, Khalid Javed, S.A Shah

IEEE International Magnetism Conference

Marina Bay Sands, Singapore April 23-27, 2018 Singapore

- 14-** Chinese Physical Society conference Daliyan, China September 12-15,2018

Local Conferences

- 1.** Potential dependent concentration variation and Domain Wall Pinning in Ferromagnetic $\text{Co}_{1-x}\text{Zn}_x$ ($x=0.4-0.5$) Nanocylinders

Naeem Ahmad, Amna Jaral, Gulbahar Bano, Sidrah Batool, Hira Dilpazir, Muhammad

Workshop on Contemporary Topics in Nanomagnetism, Feb 23-27, 2015 National Centre for Physics, Islamabad

- 2.** Domain Wall Pinning in $\text{Co}_{1-x}\text{Sn}_x$ ($x=0.4-0.5$) Nanocylinders

Conference on Emerging Materials and Processes (CEMP 2015), December 22-23,2015, NUST, Islamabad

- 3.** Magnetic interactions and Ferromagnetic relaxation in high density vertically electrodeposited $\text{Ni}_{76}\text{Fe}_{24}$ Nanowires and $\text{Ni}_{77}\text{Fe}_{23}$ Nanotubes

Naeem Ahmad, Ahmad Saeed, Suleman Khan

Workshop on Recent Trends in Nanomagnetism and Spintronics, September 28-30, 2016, National Center for Physics, Islamabad Pakistan

- 4.** Non-volatile memory in Spintronics and smart Nanomaterials

First International Physics Convention, Nov 15-16, 2016 FC College Lahore

- 5.** Smart Nanomaterials and NiFe nanowires and nanotubes

First International Conference on Emerging Trends in Materials Science

Abbotabad University of Science and Technology, Oct 5-7, 2017

- 6.** First International Conference on Nanoscience and Nanotechnology

NUST Islamabad, 1 -02 November, 2018

- 7.** International Workshop on one Dimensional Nanostructures UET Lahore December 18,2018

- 8.** 5th Conference on Frontiers of Nanoscience and Nanotechnology (CFNN 2019) PINSTECH,

Islamabad Invited Talk September 24-25, 2019

9. International Workshop on Nanomaterials for

Energy Conversion, Emerging Photovoltaic and

Optoelectronic Technologies National Centre for Physics (NCP),

Islamabad Invited Talk October 7 -09, 2019

10. China-Pakistan Bilateral Workshop on Ferromagnetic Hybrid Nano-structures NUST Islamabad

Poster Presentation December 18.2019

REFERENCES

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