



Biography

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Dr. Sujit Kumer Shil

Professor

Research Area Solid State Physics

Education

Doctor of Philosophy (Ph. D.)

City University of Hong Kong, Hong Kong (2018-2022)

Thesis Title: [Chemical Vapor Deposition Synthesis of Lead-Free All-Inorganic Antimony-Based Halide Perovskites and Their Optoelectronic Applications](#)

Master of Philosophy (M. Phil.)

Bangladesh University of Engineering and Technology, Bangladesh (2009-2014)

Thesis Title: [Investigation of Structural and Magnetic Properties of Lanthanum Substituted Ni-Mg-Cu-Zn Ferrites](#)

Master of Science (M. Sc.)

Jahangirnagar University, Bangladesh (2007-2008)

Thesis Title: [Study of Structural, Magnetic and Electrical Properties of Ni-Zn Ferrites](#)

Bachelor of Science (B. Sc.)

Jahangirnagar University, Bangladesh (2002-2006)

H. S. C.

Government Debendra College, Bangladesh (2001)

S. S. C.

Barangail Gopal Chandra High School, Bangladesh (1999)

Research Interest

Solid State Physics

Magnetic materials

Optoelectronic materials and their applications

Publication

Books

Journals

13. Howlader, R. K., Shil, S. K., Das, H. N. and Shaha, S. S. a. D. K. (2017), " Investigation of Nano-crystallization Process and Optimization of Annealing Temperature for Soft Magnetic Properties of $(\text{Fe}_{0.95}\text{Co}_{0.05})_{73.5}\text{Cu}_{1}\text{Nb}_{3}\text{Si}_{13.5}\text{B}_9$ Ribbon," *Journal of Engineering Science*, vol8, no.1, pp.95-102
12. (2023), " Chemical vapor deposition growth and photodetector performance of lead-free all-inorganic crystalline $\text{Cs}_3\text{Sb}_2\text{X}_9$ ($X = \text{I}, \text{Br}$) perovskite thin films," *Journal of Materials Chemistry C*, vol11, pp.4603-4613
11. Kwok, C. K. G., Wang, Y., Egbo, K., Hossain, M. K., Shil, S. K. and ManYu, K. (2022), " Enhancing the p-type conductivity of pure phase SnO via stoichiometry control and annealing," *Surfaces and Interfaces*, vol35, no.102473
10. (2021), " Flexibility of Room-Temperature-Synthesized Amorphous $\text{CdO-In}_2\text{O}_3$ Alloy-Films and Their Application as Transparent Conductors in Solar Cells," *ACS Appl. Mater. Interfaces*, vol13, pp.43795-4380
9. (2021), " Two-Step Chemical Vapor Deposition Synthesized Lead-Free All-Inorganic $\text{Cs}_3\text{Sb}_2\text{Br}_9$ perovskite microplates for Optoelectronic Application," *ACS Appl. Mater. Interfaces*, vol13, pp.35930-3590
8. Wang, Y., Lo, C. Y., Wong, Y. S., Kwok, C. K. G., Shil, S. K. and Yu, K. M. (2021), " Electrical conductivity and effects of mechanical bending of flexible amorphous transparent conducting $\text{CdO-Ga}_2\text{O}_3$ films synthesized by room temperature sputtering," *Journal of Alloys and Compounds*, vol875, pp.1-10
7. Egbo, K. O., Shil, S. K., Kwok, C. G., Wang, Y., Liu, C. P. and Yu, K. M. (2021), " Band alignment of wide bandgap NiO/MoO_3 and NiO/WO_3 p-n heterojunctions studied by high-resolution X-ray photoelectron spectroscopy," *Journal of Alloys and Compounds*, vol876, pp.1-9
6. (2021), " Crystalline all-inorganic lead-free $\text{Cs}_3\text{Sb}_2\text{I}_9$ perovskite microplates with ultra-fast photoconductive response and robust thermal stability," *Nano Res.*, vol14, no.11, pp.4116-4124
5. (2020), " Controlling the p-Type Conductivity and Composition Range for Bipolar Conduction in $\text{Ni}_x\text{Cd}_{1-x}\text{O}$ Alloys by Acceptor Doping," *J. Phys. Chem. C*, vol124, no.37, pp.20000-20
4. Tawhid, M. M., Shil, S. K., Shihab, M. T., Sikder, S. S. and Gafur, M. A. (2018), " The Crystallization Kinetics, Structural and Magnetic Properties of $\text{Fe}_{72.5}\text{Ag}_2\text{Nb}_3\text{Si}_{13.5}\text{B}_9$ Amorphous Ribbons as Affected by Annealing," *American Journal of Nano Research and Applications*, vol6, no.3, pp.60-66
3. Howlader, R. K., Shil, S. K. and Shaha, S. S. a. D. K. (2017), " Effect of Annealing Temperature on the Complex Permeability of $(\text{Fe}_{0.95}\text{Co}_{0.05})_{73.5}\text{Cu}_1\text{Nb}_3\text{Si}_{13.5}\text{B}_9$ Nanocrystalline Amorphous Ribbon," *Research & Reviews: Journal of Material Sciences*, vol5, no.6, pp.144-148
2. Shil, S. K., Sinha, R. C., Hakim, A. K. M. and Sikder, S. S. (2013), " Influence of composition and sintering temperature on complex permeability

of spinel type Ni-Zn Ferrite , " **Journal of Engineering Science** , vol4, no.1, pp.119-125

1. Shil,S. K. , Sinha,R. C. , Hakim,A. K. M. and Sikder,S. S. (2012) , " Effects of composition and sintering temperature on magnetic and electrical properties of spinel type Ni-Zn Ferrite," **Jahangirnagar University Journal of Science** , vol35, no.2, pp.23-36

Conference

16. Shil,S. K. and Yu,F. W. a. K. M. (9-11 May, 2023) , "Lead-Free All-Inorganic Cs3Sb2I9 Perovskite Materials synthesized by Chemical Vapor Deposition and Their Photodetector Application," **National Conference on Physics** , AECD
15. Shil,S. K. and Yu,F. W. a. K. M. (19-21 May, 2022) , "Chemical Vapor Deposition Synthesis of Lead-Free All-Inorganic Cs3Sb2I9 Perovskite Microplates for Ultra-Fast Photoconductive Response and Robust Thermal Stability," **International Conference on Physics** , AECD
14. Shil,S. K. , Wang,F. , Hossain,M. K. , Kwok,C. K. G. , Onyekachi,E. K. and Yu,W. Y. a. K. M. (November 28-December 4, 2020) , "Synthesis of Lead-Free All-Inorganic Cs3Sb2Br9 Perovskite Microplates by Two-Step Chemical Vapor Deposition for Fast Response Visible light Photodetector Application," **MRS Fall Meeting & Exhibit**
13. Shil,S. K. , Hossain,A. K. M. , Shaha,D. K. and Sikder,S. S. (11-12 May, 2018) , "Effect of Sintering Temperature on Structural and Magnetic Properties of Ni0.12Mg0.18Cu0.20Zn0.50Fe1.975La0.025O4 ferrite," **Conference on Weather Forecasting & Advances in Physics** , KUET
12. Mollick,N. C. ,Shil,S. K. and Sikder,A. H. B. a. S. S. (11-12 May, 2018) , "Effect of Magnetic Field on Real Part of Complex Permeability of Ni80-xFexB20 [20,30, 40 & 50] Amorphous Ribbons," **Conference on Weather Forecasting & Advances in Physics** , KUET
11. Howlader,R. K. , Sikder,S. S. , Shaha,D. K. and Das,S. K. S. a. H. N. (10-12 March, 2016) , "Influence of Annealing Condition on Complex Initial Permeability of Nanocrystalline (Fe0.95Co0.05)73.5Nb3Cu1Si13.5B9 ribbon," **International Conference on Physics** , AECD
10. Mollick,N. C. ,Shil,S. K. and Bhuiyan,S. S. S. a. A. H. (10-12 March, 2016) , "Effect of Annealing Temperature on Complex Permeability and Magnetization Process of Amorphous Ribbon with Composition Fe30Ni50B20," **International Conference on Physics** , AECD
9. Shil,S. K. , Hossain,A. K. M. , Shaha,D. K. and Sikder,S. S. (10-12 March, 2016) , "Study of Lattice Parameter and Néel Temperature of Lanthanum Substituted Ni-Mg-Cu-Zn Ferrites," **International Conference on Physics** , AECD
5. Shil,S. K. , Hossain,A. K. M. , Shaha,D. K. and Sikder,S. S. (2015) , "Investigation of the influences of La substitution and sintering temperature on the structural and complex permeability of Ni-Mg-Cu-Zn ferrites," **Proceeding of International Conference on Physics for Sustainable Development and Technology** , CUET, pp.22-38
4. Mollick,N. C. ,Shil,S. K. and Bhuiyan,S. S. S. a. A. H. (March 06-08, 2014) , "Effect of Field and Annealing Temperature on Complex Permeability of Amorphous Ribbon with Composition Fe40Ni40B20," **International Conference on Physics for Energy and Development**
3. Mollick,N. C. ,Shil,S. K. and Bhuiyan,S. S. S. a. A. H. (February-15, 2014) , "Effect of Annealing Temperature on Complex Initial Permeability of Amorphous Ribbon with Composition Fe50Ni30B20," **National Conference on Physics for Sustainable Development**
2. Howlader,R. K. , Shil,S. K. , Das,H. N. and Shaha,S. S. S. a. D. K. (February-15, 2014) , "Investigation of the Nano-crystallization Process and Magnetic Properties of FINEMET-Like (Fe0.95Co0.05)73.5Cu1Nb3Si13.5B9 ribbon," **National Conference on Physics for Sustainable Development**
1. Shil,S. K. , Sinha,R. C. , Hakim,A. K. M. and Sikder,S. S. (February-15, 2014) , "Effect of composition and sintering temperature on the dielectric and electrical properties of NiZn ferrites," **National Conference on Physics for Sustainable Development**