

## PUBLICATIONS: (2015 -2025)

(12721 citations as of May 2025. h-index: 65)

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(Hari's students are in italics and postdocs in bold italics. Only published journal papers are listed. Manuscripts submitted and under preparation are not listed)

### 2025

1. "Discovery of giant positive magnetoresistance in proximity to helimagnetic order in manganese phosphide nanostructured films" -*N. Mudiyansele, D. De Tellem, A. Chanda*, A.T. Duong, T-N. Hsieh, J. Frisch, M. Bar, R.P. Madhogaria, S. Mozaffari, H.S. Arachchige, D. G. Mandrus, **H. Srikanth**, S. Witanachchi and M.H. Phan, **ACS Applied Materials and Interfaces** (April 2025) <https://doi.org/10.1021/acsami.4c21202>
2. "Superparamagnetic superparticles for magnetic hyperthermia: overcoming the particle size limit" -*S. B. Attanayake*, Minh Dang Nguyen, **A. Chanda**, **J. Alonso**, Inaki Orue, T. Randall Lee, **H. Srikanth** and M. H. Phan, **ACS Applied Materials and Interfaces** **17**, 19436 (2025)
3. "Robust Nernst magneto-thermoelectricity in topological spin semi-metal FeCrRhX (X = Si,Ge)" -**A. Chanda**, J. Nag, *N. Schulz*, D. De Tellem, A. Alam, K. G. Suresh, M. H. Phan and **H. Srikanth**, **Physical Review B** **111**, 094416 (2025)

### 2024

4. "Unraveling the structural dependency of Weyl nodes in Co<sub>2</sub>MnGa" -*N. Schulz*, G. Pantano, D. DeTellem, **A. Chanda**, E.M. Clements, M. McGuire, A. Markou, C. Felser, D.A. Arena, J. Gayles, M.H. Phan and **H. Srikanth**, **Physical Review B** **110**, 054419 (2024)
5. "Large anomalous Nernst effect and its bipolarity in quaternary equiatomic Heusler alloys CrRuXGe (X = Co and Mn)" -**A. Chanda**, J. Nag, *N. Schulz*, A. Alam, K.G. Suresh, M.H. Phan and **H. Srikanth**, **Physical Review B****109**, 224415 (2024)
6. "Tailoring the magnetic and hyperthermic properties of biphasic iron oxide nanocubes through post-annealing" -*S. Attanayake*, **A. Chanda**, R Das, M.H. Phan and **H. Srikanth**, **Crystals** **14**, 519 (2024) <https://doi.org/10.3390/cryst14060519>
7. "Thermally generated magnonic spin currents in a polycrystalline gadolinium iron garnet thin film with perpendicular magnetic anisotropy" -**A. Chanda**, C. Holzmann, *N. Schulz*, D. Stein, M. Albrecht, M.H. Phan and H. Srikanth, **Journal of Applied Physics** **135**, 123901 (2024)
8. "Temperature evolution of magnon propagation length in Tm<sub>3</sub>Fe<sub>5</sub>O<sub>12</sub> thin films: Roles of magnetic anisotropy and Gilbert damping" -**A. Chanda**, C. Holzmann, *N. Schulz*, A. Ullrich, *D. DeTellem*, M. Albrecht, M. Gross, C.A. Ross, D. A. Arena, M.H. Phan and **H. Srikanth**, **ACS Nano** <https://doi.org/10.1021/acs.nano.3c12495> (2024)

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9. “Large thermo-spin effects Heusler alloy-based spin gapless semiconductor thin films” - **A. Chanda**, Deepika Rani, D. DeTelle, N. Alzahrani, D. A. Arena, S. Witanachchi, Ratnamala Chatterjee, M.H. Phan and **H. Srikanth**, **ACS Applied Materials & Interfaces** **15**, 53697 (2023)
10. “Hybrid 0D/2D metamaterials with room-temperature ferromagnetism” -N. Kapuruge, T. Alba, K. Lasek, *N. Schulz*, Y. Wadumesthri, F. A. Nugera, V. Ortiz, R. Hyde, J. Pan, H. Srikanth, M.H. Phan and H. Gutierrez, **2023 IEEE Nanotechnology Materials and Devices** 817 (2023)
11. “Intrinsic Berry curvature driven anomalous Nernst thermopower in the semimetallic Heusler alloy CoFeVSb” -**A. Chanda**, J. Nag, A. Alam, K.G. Suresh, M.H. Phan and **H. Srikanth**, **Physical Review B (LETTER)** **107**, L220403 (2023)  
<https://doi.org/10.1103/PhysRevB.107.L220403>
12. “Influence of hard-soft layer ordering on magnetization reversal of bimagnetic nanoparticles: implications for biomedical/theranostic applications” -C. Kongs, K. Krycka, *J. Robles*, N. Ntallis, M. Pereiro, M.H. Phan, **H. Srikanth**, J.A. Borchers, D.A. Arena, **ACS Applied Nanomaterials** (June 2023) DOI: 10.1021/acsnm.3c00510
13. “Surface termination-enhanced magnetism at nickel ferrite/2D nanomaterial interfaces: implications for spintronics” -*N. Schulz*, **A. Chanda**, G. Datt, C.S. Ong, F. Sorgenfrei, S. Ambardar, D.V. Voronine, O. Eriksson, T. Sarkar, V. Kamalakar, M.H. Phan and **H. Srikanth**, **ACS Applied Nanomaterials** (June 2023) <https://doi.org/10.1021/acsnm.3c01352>
14. “Competing magnetic interactions and field-induced metamagnetic transition in highly crystalline phase-tunable iron oxide nanorods” -*S. Attanayake*, **A. Chanda**, T. Hulse, R. Das, M.H. Phan and **H. Srikanth**, **Nanomaterials** **13**, 1340 (2023)
15. “From multi-segmented to core-shell nanorods: morphology evolution in Fe-Au nanorods by tuning fabrication conditions” -Hafsa Khurshid, Rahaana Yoosuf, Humaira Zafar, *Supun Attanayake*, Muhammad Azeem, Bashar Issa, Dalaver Anjum and **Hari Srikanth**, **Nanotechnology** **34**, 18502 (2023)
16. “Enhanced magnetism and anomalous Hall transport through 2D WS<sub>2</sub> interfaces” - *Chang-Ming Hung*, D.T.Dang, **A. Chanda**, *D. Detelle*, N. Alzahrani, N. Kapuruge, *Y.T.H Pham*, M. Liu, D. Zhou, H. Gutierrez, D.A. Arena, M. Terrones, S. Witanachchi, L.M. Woods, **H. Srikanth** and M.H. Phan, **Nanomaterials** **13**, 771 (2023)
17. “Effects of annealing temperature on the magnetic properties of highly crystalline biphasic iron oxide nanorods” -*S.B. Attanayake*, **A. Chanda**, R. Das, M.H. Phan and **H. Srikanth**, **AIP Advances** **13**, 025333 (2023)
18. “Magnetism and spin dependent transport phenomena across Verwey and Morin transitions in iron oxide/Pt bilayers” -**A. Chanda**, *Chang-Ming Hung*, Anh Tuan Dong, S. Cho, **H. Srikanth** and M.H. Phan, **Journal of Magnetism and Magnetic Materials** **568**, 170370 (2023)

## 2022

19. “Emergence of asymmetric skew scattering dominated anomalous Nernst effect in spin gapless semiconductors Co<sub>1+x</sub>Fe<sub>1-x</sub>CrGa” -**A. Chanda**, Deepika Rani, J. Nag, A. Alam, K.G. Suresh, M.H. Phan and **H. Srikanth**, **Physical Review B** **106**, 134416 (2022)  
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20. “Emergent magnetism and exchange bias effect in iron oxide nanocubes with tunable phase and size” -*Supun Attanayake, Amit Chanda*, Raja Das, Nalaka Kapuruge, Humberto Gutierrez, Manh-Huong Phan and **Hari Srikanth**, **Journal of Physics: Condensed Matter** **34**, 495301 (2022) <https://doi.org/10.1088/1361-648X/ac99cc>
21. “Macrospin model of an assembly of magnetically coupled core-shell nanoparticles” -N. Ntallis, C. Kons, H. Srikanth, M.H. Phan, D.A. Arena and M. Pereiro, **Physical Review B** **106**, 104402 (2022) <https://doi.org/10.1103/PhysRevB.106.104402>
22. “Elastically induced magnetization at ultrafast time scales in a chiral helimagnet” -H. Liu, M. Tuan Trinh, **E.M. Clements**, D. Sapkota, L. Li, Z. Romestan, S. Bhat, V. Mapara, A. Barua, S. Langelund Carrera, M.H. Phan, D. Arena, **H. Srikanth**, Dr. Mandrus, A. Romero and D. Karaiskaj, **Physical Review B** **106**, 035103 (2022)
23. “Proximity enhanced magnetism at NiFe<sub>2</sub>O<sub>4</sub>/Graphene interface” -*N.Schulz, A. Chanda*, G. Datt, M.Venkata Kamalakar, T. Sarkar, M.H. Phan and **H. Srikanth**, **AIP Advances** **12**, 035132 (2022) <https://doi.org/10.1063/9.0000271>
24. “Emergent magnetic properties of biphasic iron oxide nanorods” -*S.B. Attanayake, A. Chanda, R. Das*, M.H. Phan and **H. Srikanth**, **AIP Advances** **12**, 035136 (2022) <https://doi.org/10.1063/9.0000256>
25. “Spin Seebeck Effect in Iron Oxide Thin Films: Effects of phase transition, phase coexistence and surface magnetism” -*A. Chanda*, D. DeTellem, Y. Pham, J. Shoup, A.T. Duong, **R. Das**, S. Cho, D.V. Voronine, M. Tuan Trinh, D. Arena, S. Witanachchi, **H. Srikanth** and M. H. Phan, **ACS Applied Materials and Interfaces** <https://doi.org/10.1021/acami.1c23284> (March 2022)
26. “Surface magnetic anisotropy-mediated spin Hall magnetoresistance and spin Seebeck effects in a YIG/Pt heterostructure” -*V. Kalappattil, R. Das*, M.H. Phan and **H. Srikanth**, **Journal of Magnetism and Magnetic Materials** **551**, 169173 (2022); <https://doi.org/10.1016/j.jmmm.2022.169173>
27. “Scaling of the thermally induced sign inversion of longitudinal spin Seebeck effect in a compensated ferrimagnet: role of magnetic anisotropy” -A. Chanda, C. Holzmann, N. Schulz, J. Seyd, M. Albrecht, M.H. Phan and **H. Srikanth**, **Advanced Functional Materials** **32** 2109170 (2022); <https://doi.org/10.1002/adfm.202109170>
28. “Thermal generation of spin current and magnon propagation length in compensated ferrimagnetic Gd<sub>3</sub>Fe<sub>5</sub>O<sub>12</sub> thin films” -*A. Chanda, N. Schulz, C. Holzmann, J. Seyd, M. Albrecht, M.H. Phan and H. Srikanth*, **IEEE Transactions on Magnetics** <https://ieeexplore.ieee.org/document/9686649#:~:text=DOI%3A%2010.1109/TMAG.2022.3144835> DOI: 10.1109/TMAG.2022.3144835 (January 2022)
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## 2021

30. “MnP films with desired magnetic, magnetocaloric and thermoelectric properties for a prospective magneto-thermo-electric cooling device” -C.M. Hung, **R.P. Madhogaria**, B.

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31. “Radiofrequency transverse susceptibility as a probe to study magnetic systems” -**S. Chandra** and **H. Srikanth**, Book Chapter (pp. 119-137) in “*Magnetic Measurement Techniques for Materials Characterization*” -Ed. V. Franco, B. Dodrill (Springer 2021) <https://doi.org/10.1007/978-3-030-70443-8>
  32. “Tablelike magnetocaloric effect and enhanced refrigerant capacity in  $\text{EuO}_{1-\delta}$  thin films” - *P. Lampen-Kelley, R. Madhogaria, N.S. Bingham, M.H. Phan, P.M.S. Monteiro, N.J. Steinke, A. Ionescu, C.H.W. Barnes and H. Srikanth*, **Physical Review Materials** **5**, 094404 1-7 (2021)
  33. “Tunable competing magnetic anisotropies and spin reconfigurations in ferrimagnetic  $\text{Fe}_{100-x}\text{Gd}_x$  alloy films” -*A. Chanda, J. E. Shoup, N. Schulz, D. A. Arena and H. Srikanth*, **Physical Review B** **104**, 094404 1-14 (2021)
  34. “Competing magnetic interactions and emergent phase diagrams in double perovskite  $\text{Y}_2\text{Ni}_x\text{Co}_{1-x}\text{MnO}_6$ ” -*R.P. Madhogaria, N.S. Bingham, R. Das, M.H. Phan and H. Srikanth*, **Journal of Alloys and Compounds** **888**, 161624 1-9 (2021)
  35. “Enhanced magnetocaloric performance in nanocrystalline/amorphous  $\text{Gd}_3\text{Ni}/\text{Gd}_{65}\text{Ni}_{35}$  composite microwires” -*Y.F. Wang, Y.Y. Yu, H. Belliveau, N.T.M. Duc, H.X. Shen, J.F. Sun, J.F. Liu, F.X. Qin, S.C. Yu, H. Srikanth and M.H. Phan*, **Journal of Science: Advanced Materials and Devices** (2021) <https://doi.org/10.1016/j.jsamd.2021.07.010>
  36. “Iron oxide nanotubes and nanorings for magnetic hyperthermia: the problem of intraparticle interactions” -*R. Das, J. Alonso Masa, V. Kalappattil, Z. Nemati, I. Rodrigo, E. Garaio, J.A. Garcia, M.H. Phan and H. Srikanth*, **Nanomaterials** **11**, 1380 1-12 (2021)
  37. “Strain modulated helimagnetism and emergent magnetic phase diagrams in highly crystalline  $\text{MnP}$  nanorod films” -*R.P. Madhogaria, C.M. Hung, B. Muchcharla, A.T. Duong, R. Das, P.T. Huy, S. Cho, S. Witanachchi, H. Srikanth and M.H. Phan*, **Physical Review B** **103**, 184423 1-12 (2021)
  38. “Hybrid magnetic nanoparticles as efficient nanoheaters in biomedical applications” (mini-review) -*G.C. Lavorato, R. Das, J. Alonso Masa, M.H. Phan and H. Srikanth*, **Nanoscale Advances** **3**, 867 1-22 (2021)
  39. “Role of magnetic anisotropy on the hyperthermia efficiency in spherical  $\text{Fe}_{3-x}\text{Co}_x\text{O}_4$  ( $x=0-1$ ) nanoparticles” -*Raja Das, Ngoc Pham Kim, S. Attanayake, M.H. Phan and H. Srikanth*, **Applied Sciences** **11**, 930 (2021)
  40. “Hollow Magnetic Nanoparticles” -*H. Khurshid, Z. Nemati, O. Iglesias, J. Alonso, M.H. Phan and H. Srikanth*, (Book Chapter in “**New Trends in Nanoparticle Magnetism**” - Edited by Davide Peddis, Sara Laureti and Dino Fiorani (pages 137-158)(Springer, 2021)
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  42. “Magnetic anomalies associated with domain wall freezing and coupled electron hopping in magnetite nanorods” -*Raja Das, Vijaysankar Kalappattil, Manh-Huong Phan and Hari Srikanth*, **Journal of Magnetism and Magnetic Materials** **522**, 167564 1-6 (2021)

43. “Unraveling the nature of Fe-doping mediated inter- and intra-chain interactions in  $\text{Ca}_3\text{Co}_2\text{O}_6$ ” -**R. Das**, N.T. Dang, **V. Kalappattil**, **R.P. Madhogaria**, D.P. Kozlenko, S.E. Kichanov, E.V. Lukin, AV Rutkavkas, TPT Nguyen, LTP Thao, N.S. Bingham, **H. Srikanth** and M. Phan, **Journal of Alloys and Compounds** **851**, 156897 (2021)

## 2020

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46. “Shell-mediated control of surface chemistry of highly stoichiometric magnetite nanoparticles” -**G.C. Lavorato**, A.A. Rubert, Y.T. Xing, **R. Das**, **J. Robles**, F.J. Litterst, E. Baggio-Saitovitch, M.H. Phan, **H. Srikanth**, C. Vericat, M. Fonticelli, **Nanoscale** **12**, 13626-13636 (2020)
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51. “Origin of shell driven optimization of heating power in core-shell bimagnetic nanoparticles” -**G.C. Lavorato**, **R. Das**, Y.T. Xing, **J. Robles**, F.J. Litterst, E.B. Saitovitch, M.H. Phan and **H. Srikanth**, **ACS Applied Nano Materials** **3**, 1755 (2020)
52. “Impact of reduced dimensionality on the correlation length and magnetization dynamics of the spin chain cobaltite  $\text{Ca}_3\text{Co}_2\text{O}_6$ ” -**P. Lampen-Kelley**, **E.M. Clements**, **B. Casas**, M.H. Phan, **H. Srikanth**, J. Marcin, I. Skorvanek, H.T. Yi, S.W. Cheong, **Journal of Magnetism and Magnetic Materials** **493**, 165690 (2020)

## 2019

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54. “Enhanced refrigerant capacity and Curie temperature of amorphous  $Gd_{60}Fe_{20}Al_{20}$  microwires” -N.T.M. Duc, H.X. Shen, **E.M. Clements**, **O. Thiabgoh**, J.L. Llamazares, C.F. Sanchez-Valdez, N.T. Huong, J.F. Sun, **H. Srikanth** and M.H. Phan, **Journal of Alloys and Compounds** **807**, 151694 1-9 (2019)
55. “Critical magnetic and magnetocaloric behavior of amorphous melt-extracted  $Gd_{50}(Co_{69.25}Fe_{4.25}Si_{13}B_{13.5})_{50}$  microwires” -N.T.M. Duc, H.X. Shen, **E. Clements**, **O. Thiabgoh**, J.L. Sanchez-Llamazares, C.F. Sanchez-Valdes, N.T. Huong, J.F. Sun, **H. Srikanth**, M.H. Phan, **Intermetallics** **110**, 106479 1-7 (2019)
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57. “Evidence of long range ferromagnetic order and spin frustration effects in double perovskite  $La_2CoMnO_6$ ” -**R. Madhogaria**, **R. Das**, **E.M. Clements**, **V. Kalappattil**, M.H. Phan, **H. Srikanth**, N.T. Dang, D.P. Kozlenko, N.S. Bingham, **Physical Review B** **99**, 104436 1-13 (2019)
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59. “Magnetic anisotropy and switching behavior of  $Fe_3O_4/CoFe_2O_4$  core-shell nanoparticles” -**R. Das**, J. Robles, M. Glassell, V. Kalappattil, M.H. Phan and H. Srikanth, **Journal of Electronic Materials** **48**, 1461-1466 (2019)

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66. “Exchange coupled Fe<sub>3</sub>O<sub>4</sub>/CoFe<sub>2</sub>O<sub>4</sub> nanoparticles for advanced magnetic hyperthermia” –*J. Robles*, **R. Das**, M. Glassell, M.H. Phan and **H. Srikanth**, **AIP Advances** **8**, 056719 1-6 (2018)
67. “Mossbauer studies of core-shell FeO/Fe<sub>3</sub>O<sub>4</sub> nanoparticles” –A. S. Kamzin, A.A. Valiullin, **H. Khurshid**, *Z. Nemati*, **H. Srikanth**, M.H. Phan, **Physics of the Solid State** **60**, 382 1-8 (2018)
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