CURRICULUM VITAE

Nama Lengkap	: Prof. Dr. Drs. Togar Saragi, M.Si (Head of Quality Assurance, FMIPA)
Scopus ID	: 6507246851
Orchid ID	: https://orcid.org/0000-0003-2792-6906
WoS ResearcherID	: AAC-3640-2021
Google Scholar	: DUpB3vUAAAAJ
Sinta ID	: 5994070
E-mail	: t.saragi@phys.unpad.ac.id t.saragi@unpad.ac.id
h-index	: 10

Education:

1988 - 1993	Bachelor Degree – University of Medan (Unimed) in Physics Education
1994 - 1997	Magister Degree – Institut Teknologi Bandung (ITB) in Physics
1997 - 2005	Doktoral Degree – Institut Teknologi Bandung (ITB) in Physics

Employment Record

1993	Assistance Professor in Department of Physics Sam Ratulangi University, North Sulawesi
2007	Assistance Professor in Department of Physics Padjadjaran University Bandung, West Java
2017	Associate Professor in Department of Physics Padjadjaran University Bandung, West Java
2024	Professor in Department of Physics Padjadjaran University Bandung, West Java

Visiting Scientist

2012 - 2019	Departement of Applied Physics Graduate School of Engineering, Tohoku University, Japan
2019	RIKEN (The Physical and Chemical Research Institute), Japan
2022	World Class Professor Program (WCP2022) – Sophia University, Japan
2025	CROSS J-Parc Tokai-Japan

Focus Research

Focus of research lies in the study of Superparamagnetic Iron Oxide Nanoparticles (SPION) and its surface modification for catalysist, antimicrobial, and biomedical applications.

Professional Membership

- Indonesian Magnetic Society (IMS)
- Physcical Society of Indonesia (PSI)

Professional Certificate:

2023 – Now: Assessor LAMSAMA (NIRA: 02-002-2023)

Reward:

- Tanda Kehormatan Satyalancana Karya Satya X Tahun (10-*Years Honorary Medal*), 22 April 2014. Presiden of Republic of Indonesia.
- Tanda Kehormatan Satyalancana Karya Satya XX Tahun (20-*Years Honorary Medal*), 7 Agustus 2018. Presiden of Republic of Indonesia.

- Satya Karya Bhakti Kelas I - 25 Tahun (25-*Years Honorary Medal*), September 2024. Universitas Padjadjaran.

Publications (selected):

1. In Situ Surface Modification by Oleic Acid of Magnetite Nanoparticles: Surface Interaction, Structure, and Its Magnetic Properties. Journal Materials Science: Materials Engineering (JMS-ME), Q2 (2025)
2. Particles Size and Its Distribution Deduced from Magnetic Properties of Magnetite Nanoparticles by Modified Langevin. AIP-Advances (Q2), (2023)
3. Study of Magnetic Properties and Relaxation Time of Nanoparticle Fe_3O_4-SiO_2. Materials (2022), Q2.
4. Refining Process and Identifying Content of Local Iron Sand. Material Science Forum (MSF), (2021)
5. Fe_3O_4.SiO_2: A Study of Structural and Magnetic Properties in Various Volume of Tetraethyl Orthosilicate". Key Engineering Material (KEM), (2020).
6. Blocking Temperature of Magnetite Nanoparticles Fe_3O_4 Encapsulated Silicon Dioxide SiO_2. Key Engineering Material (KEM), (2020).
7. Physical Properties of Encapsulated Iron Oxide. Materials Science Forum (MSF), (2019).
8. The Effect of pH and Sintering Treatment on Magnetic Nanoparticles Ferrite Based Synthesized by Coprecipitation Method. Journal of Physics Conf. Series (2018)
9. The Impact of Synthesis Temperature on Magnetit Nanoparticles Size Synthesized by Co-Precipitation Method. Journal of Physics Conf. Series (2018).
10. Synthesis and Properties of Iron Oxide Particles Prepared by Hidrothermal Method. IOP Conf. Series: Materials Science and Engineering (2017).
11. Karakteristik nanopartikel ZnO: studi efek pelarut pada proses hidrothermal, (JMEI), 2016.
12. Karakterisrik Kristal Dan Optik Nanopartikel Zinc Oxide: Kajian Efek Molaritas Dalam Proses Hidrothermal, Spektra: Jurnal Fisika Dan Aplikasinya (2016).
13. Synthesis of Cobalt Ferrite Particles by Utilized Sol-Gel Method, Material Science Forum (MSF), 2015.
14. The Effect of Molar Composition of Co^{2+} to Structure and Magnetic Properties of $CoFe_2O_4$, AIP Conference Proceedings, (2013).

International Seminar:

1. 5th International Conference & Exhibition on Powder Technology Indonesia 2025 (ICePTi 2023), The 6th Padjadjaran International Physics Symposium 2025 (6th-PIPS2025. Bale Sawala, Universitas Padjadjaran, Jatinangor, Indonesia. August 4-5, 2025. (**Invited Speaker**).
2. International Conference on Magnetics and Its Applications (ICMIA) 2024 – in Yogyakarta organized by Indonesian Magnetics Society (IMS) in collaboration with Department of Physics, Universitas Gadjah Mada. Loman Park Hotel Yogyakarta, Indonesia, September 5-6, 2024 (**Invited Speaker**).
3. 5th International Symposium on Advanced Magnetic Materials and Applications (ISAMMA 2024). Gold Coast Hotel Resort & Spa, Dong Hoi City, Quang Binh Province, Vietnam, 4-7 Agustus 2024.
4. The 1st Conference on Accelerator-Based Science and Technology (CAST 2024). The School on Advanced Spectroscopy for Material Sciences (**Invited Speaker**). BRIN, Gedung Graha Widya Bakti, KST B.J. Habibie, Room A (Balai Sidang), 19-22 Februari, 2024.
5. 4th International Conference & Exhibition on Powder Technology Indonesia 2023 (ICePTi 2023), the 13th International Conference on Theoretical and Applied Physics

2023 (ICTAP 2023), and the Simposium Fisika Nasional XXXVI (SFN 2023), Bali August 21-22, 2023
6. 6th International Conference on 6th International Conference on Functional Materials Science 2022. Bali, June November 29-30, 2022
7. International Conference on Magnetic and Its Application (ICMIA), Bali, June 2-3, 2022
8. 5th PIPS 2022: Padjadjaran International Physics Symposium (**Invited Speaker**), Zoominar, February 10, 2022
9. International Conference on Functional Materials Science 2020 (ICFMS 2020), Zoominar, November 11-12, 2020
10. The International Conference on Magnetism and Its Applications (ICMIA 2019). Solo, November 20-21, 2019.
11. 4th-Padjadjaran International Physics Symposium (PIPS-2019). Bandung, November 13-14, 2019.
12. Webinar Series IMS, 2020, Zoominar June 26, 2020
13. The 3rd Padjadjaran International Physics Symposium 2017 (PIPS 2017). Bandung, November 14-15, 2017.
14. Mathematics, Science, and Computer Science Education International Seminar, MSCEIS2017, Bandung October 14, 2017.
15. The International Workshop on Organic Molecular Systems". Organinzed by RIKEN Nishina Center and Universiti Sains Malaysia. Penang Malaysia, August 103, 2017.
16. 3rd International Conference on Funtional Materials (3rd ICFMS), Bali, October 19-20, 2016.
17. Padjadjaran International Physics Symposium (PIPS), Jatinangor, September 1-2, 2015.
18. 2nd International Conference on Functional Materials Science 2014, Lombok, November 12-13, 2014.
19. Padjadjaran International Physics Symposium (PIPS), Jatinangor, May 1-8, 2013.
20. International Symposium on Functional Material Science, Bali, April 27-28, 2010.
21. Symposium and International Collaboration Program on Functional Magnetic Materials, Jatinangor, April 28-29, 2010.

Professional Grant:

1. Sintesis, Modifikasi Permukaan dan Enkapsulasi Magnetite untuk Meningkatkan Karakteristik Superparamagnet dalam Aplikasi Biomedis. Penelitian Fundamental-Reguler (PFR) Kemdiktisaintek, Tahun ke-3 – 2026.
2. A Systematic Review of Fatty Acid-Functionalized Magnetic Nanoparticles for Biomedical Applications: Synthesis, Stability, and Therapeutic Potential. Riset Turunan Hibah Penulisan Buku Ajar/Referensi Universitas Padjadjaran Tahun Anggaran 2026.
3. Dispersibilitas nanopartikel Magnetik Oksida Besi Untuk menghasilkan Superparamagnetik Ideal Sebagai bahan Remediasi Lingkungan. Riset Kolaborasi Indonesia - Prioritas Research Nasional (RKI-PRN) Konsorsium PTNBH Skema B1 Tahun 1.
4. Recent Advances of Zeolite Imidazolate Frameworks (ZIF-8 and ZIF-67) For Heavy Metals Adsorbent. Hibah Artikel Review EQUITY-WCU Universitas Padjadjaran Tahun Anggaran 2025.
5. Sintesis, Modifikasi Permukaan dan Enkapsulasi Magnetite untuk Meningkatkan Karakteristik Superparamagnet dalam Aplikasi Biomedis. Penelitian Fundamental-Reguler (PFR) Kemdiktisaintek, Tahun ke-2 - 2025.
6. Sintesis dan Karakterisasi Nanopartikel Fe3O4-OA/PEG/AGAR: Studi Morfologi, Gugus Fungsi, Struktur, dan Parameter Magnetik. Penelitian Tesis Magister (PPS-PTM) Kemdiktisaintek, 2025.
7. Magnetostatika. Seri Mudah Belajar Magnetostatika. Riset Turunan Hibah Penulisan Buku Ajar/Referensi Universitas Padjadjaran Tahun Anggaran 2025.

8. Sintesis, Modifikasi Permukaan dan Enkapsulasi Magnetite untuk Meningkatkan Karakteristik Superparamagnet dalam Aplikasi Biomedis. Penelitian Fundamental (PFR) Kemenristekdikbud, Tahun ke-1 - 2024.
9. Optimasi Karakteristik Superparamagnetik Nanopartikel Fe3O4 Termodifikasi Permukaan dengan Asam Oleat. Penelitian Tesis Magister (PPS-PTM) Kemenristekdikbud Dikti, 2024.
10. 2022, World Class Professor (WCP2022): Pengembangan Kajian Sifat Magnet Bahan Berbasis Fe Untukaplikasi Drug-Delivery – KemendikbudDikti (LPDP).
11. 2021-2022, Enkapsulasi Bahan Magnet Berbasis Fe untuk Aplikasi Drug Delivery – PDUPT-DIKTI
12. 2018-2019, Sintesis dan Modifikasi Coating Nanopartikel Material Magnet – RKDU
13. 2017, Sintesis dan Modifikasi Permukaan Coating Nanopartikel Material Magnet – HIU RFU
14. 2014-2015, Sintesis Nanopartikel Lapisan Aktif ZnO Dalam Pengembangan Bahan Solar Cell Dengan Metode Hydrothermal – PDUPT (Penelitian Desentralisasi Unpad).
15. 2012-2013, Preparasi Film Tipis Nano Magnetik dengan Metode Sol Gel dan Karakterisasinya untuk Aplikasi Media Perekam Tinggi – Penelitian Program Hibah Bersaing (PHB)-DIKTI.
16. 2010, Program Academic Recharging (PAR-C) at Nanocore Temasek National University of Singapore (NUS) – DIKTI.

Course Subject:

1. Elementary Physics I
2. Elementary Physics II
3. Electricity and Magnetism
4. Magnetic and Superconducting Materials
5. Introduction to Physics of Solids
6. Introduction to Materials Physics
7. Material Synthesis Method
8. Magnetic Characterisation Techniques
9. Particle Transport System
10. Crystallography and Characterisation Techniques (Magister Degree)
11. Magnetic Physics and Superconductivity (Magister Degree)
12. Electrodynamics (Magister Degree)
13. Advanced Materials for Energy and Healthcare Applications (Magister Degree).