MEMORIU ȘTIINȚIFIC

Drd. Doina-Antonia MERCAN

Studii de doctorat

Perioada: 2021-2025

Conducător științific: Prof. Dr. Ing. **Alexandru Mihai GRUMEZESCU**

Domeniu: Inginerie Chimică

Titlul tezei de doctorat: **MAGNETITE-BASED NANOSTRUCTURED MATERIALS OBTAINED BY MICROFLUIDIC TECHNIQUES**

Activitate științifică

A. Lista de lucrări științifice (articole în reviste sau volume)

1. **Mercan, D.-A.;** Niculescu, A.-G.; Bîrcă, A.C.; Cristea, D.-E.; Moroșan, A.; Tudorache, D.-I.; Purcăreanu, B.; Vasile, B.Ș.; Radu, D.; Grigoroscuta, M.A.; *et al*. Vortex-Mixing Microfluidic Fabrication of Micafungin-Loaded Magnetite–Salicylic Acid–Silica Nanocomposite with Sustained-Release Capacity. *Materials* **2024**, *17*, 5816. https://doi.org/10.3390/ma17235816.
2. **Mercan, D.-A.;** Tudorache, D.-I.; Niculescu, A.-G.; Mogoantă, L.; Mogoșanu, G.D.; Bîrcă, A.C.; Vasile, B.Ș.; Hudiță, A.; Voinea, I.C.; Stan, M.S.; *et al*. Antimicrobial Coatings Based on Hybrid Iron Oxide Nanoparticles. *Nanomaterials* **2025**, *15*, 637. https://doi.org/10.3390/nano15090637.
3. **Mercan, D.-A.;** Niculescu, A.-G.; Grumezescu, A.M. Nanoparticles for Antimicrobial Agents Delivery—An Up-to-Date Review. *Int. J. Mol. Sci.* **2022**, *23*, 13862. https://doi.org/10.3390/ijms232213862.
4. Grămadă (Pintilie), A.M.; **Mercan, D.-A.;** Niculescu, A.-G.; Grumezescu, A.M.; Moldoveanu, E.T.; Tudorache (Trifa), D.-I.; Balaure, P.C.; Rădulescu, M.; Alberts, A. Shifting From Traditional Antibiotics To Nanoparticle-Based Therapeutics As Promising Alternatives Against Multi-Drug-Resistant Pathogens. *U.P.B. Scientific Bulletin Series B* **2025,** *87*.

B. Conferințe

1. Moldoveanu, E.T.; **Mercan, D.-A.;** Niculescu, A.-G.; Bîrcă, A.C.; Tudorache (Trifa), D.-I.; Vasile, B.Ș.; Hadibarata, T.; Mihaiescu, D.E.; Hudiță, A.; Rădulescu, M.; Grumezescu, A.M. Aerogel Magnetic Nanoparticle Synthesis Using Microfluidic Devices for Healthcare and Environmental Applications. *ICSM 2025 – 10th International Conference on Superconductivity and Magnetism – Session „Magnetism of Nanoparticles, Nano-Wires and Nano-Structures”.* Ölüdeniz-Fethiye/Muğla, Turcia, 26 Aprilie – 3 Mai **2025**.
2. Tudorache (Trifa), D.-I.; Bîrcă, A.C.; Niculescu, A.-G.; **Mercan, D.-A.;** Trușcă, R.D.; Vasile, B.Ș.; Hadibarata, T.; Mihaiescu, D.E.; Hudiță, A.; Rădulescu, M.; Grumezescu, A.M. Optimization of Magnetic Nanoparticle Synthesis Using Microfluidic Devices. *ICSM 2025 – 10th International*

Conference on Superconductivity and Magnetism – Session „Magnetism of Nanoparticles, Nano-Wires and Nano-Structures”. Ölüdeniz-Fethiye/Muğla, Turcia, 26 Aprilie – 3 Mai **2025.**

3. **Mercan, D.-A.;** Niculescu, A.-G.; Bîrcă, A.C.; Tudorache (Trifa), D.-I.; Burdușel, A.C.; Vasile, B.Ș.; Hadibarata, T.; Mihaiescu, D.E.; Hudiță, A.; Rădulescu, M.; Grumezescu, A.M. Advanced On-Chip Synthesis and Application of Magnetic Core-Shell Nanoparticles and Aerogels for Pollution Mitigation. *ICSM 2025 – 10th International Conference on Superconductivity and Magnetism – Session „Magnetism of Nanoparticles, Nano-Wires and Nano-Structures”.* Ölüdeniz-Fethiye/Muğla, Turcia, 26 Aprilie – 3 Mai **2025.**
4. **Mercan, D.-A.;** Niculescu, A.-G.; Bîrcă, A.C.; Tudorache (Trifa), D.-I.; Moldoveanu, E.T.; Vasile, B.Ș.; Hadibarata, T.; Mihaiescu, D.E.; Hudiță, A.; Rădulescu, M.; Grumezescu, A.M. Novel 3D-printed microfluidic platform tested for the production of nanocomposites used in water decontamination applications. *ICSM 2025 – 10th International Conference on Superconductivity and Magnetism – Session „Magnetism of Nanoparticles, Nano-Wires and Nano-Structures”.* Ölüdeniz-Fethiye/Muğla, Turcia, 26 Aprilie – 3 Mai **2025.**

Student-doctorand

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