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## L I S T A

### LUCRĂRILOR ȘTIINȚIFICE

#### A. Teza de doctorat

Contribuții la mecanismul reacției de descompunere termică a amoniacului, (2006)

Conducător științific, Prof. dr. Lucia Odochian

#### B. Cărți si capitole în cărți publicate în ultimii 5 ani

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#### C. Lucrări indexate ISI/BDI publicate în ultimii 5 ani

1. **Dirtu, D.**, Pancu, M., Minea, L.M., Occurrence of Selected Anthropogenic Organic Contaminants in Drinking Water from rural areas of Eastern Romania, **Acta Chemica Iasi**, 29, 2, 166-182, 2021.
2. Borhan, A.I., Herea, D.D., Husanu, M.A., Popescu, G.D, Borca, N.C, Huthwelker, T, Bulai, G, Radu, I, Dirtu, A.C, **Dirtu, D**, Pui, A., Ghercă, D., Straightforward FeOOH nanografting of Al-based SrTiO<sub>3</sub> perovskite material as core-shell nanoflower-like heteronanostructure with enhanced solar light-driven photodegradation capability, **Applied Surface Science**, Vol. 614, 2023.
3. Borhan, A.I., Ghemes, A.I., Husanu, M.-A., Huthwelker, T., Bulai, G, Radu, I, Dirtu, A.C, **Dirtu, D**, Iordan, A.R., Ghercă, D., Carbon-based heterostructure from multi-photo-active nanobuilding blocks SrTiO<sub>3</sub>@NiFe<sub>2</sub>O<sub>4</sub>@Fe<sub>0</sub>@Ni<sub>0</sub>@CNTs with derived nanoreaction metallic clusters for enhanced solar light-driven photodegradation of harmful antibiotics, **Applied Surface Science**, Vol. 622, 2023.

4. Buema, G., Minuti, AE, Borhan, AI., Borca, CN., **Dirtu, D.**, Dirtu, AC., Dobromir, M., Stoian, G., Ababei, G., Chiriac, H., Lupu, N., Dragos-Pinzaru, OG., Gherca, D., Unmodified Mg/Al layered double hydroxide clay with versatile and specific adsorption capacity over high spectrum type of harmful contaminants, **Materials Chemistry and Physics**, Vol. 326, 2024.
5. Radu, I., Borhan, AI., Gherca, D., Dirtu, AC., **Dirtu, D.**, Popescu, DG., Husanu, MA., Pui, A., Cobalt oxyhydroxide co-catalyst loaded onto Al:SrTiO<sub>3</sub> surface to boost photocatalytic performance, **Materials Chemistry and Physics**, Vol. 332, 2025.

#### **D. Lucrări publicate în ultimii 10 ani în reviste și volume de conferințe cu referenți (neindexate)**

1. Radu, I., Borhan, A.I, **Dirtu, D.**, Pui, A., Self-assembled FeOOH (oxy)hydroxide on colloidal Al:SrTiO<sub>3</sub> perovskite as solar light-driven photocatalyst for antibiotics degradation, The 12th International Conference “Nanomaterials: Applications & Properties” (IEEE NAP-2022), 11-16 Septembrie 2022, Cracovia, Polonia.
2. Borhan, A.I., Ghercă, D., Radu, I., Dirtu, A.C., **Dirtu, D.**, Palamaru, M.N., Popescu, D.M., Husanu, M.A., Iordan, A.R., Hierarchical carbon based-NiFe<sub>2</sub>O<sub>4</sub> composite nanostructures with excellent light response and magnetic performance synthesized toward enhanced photocatalytic degradation of active pharmaceutical ingredients, 17th International Conference of Constructive Design and Technological Optimization in Machine Building, 25-27 Mai 2022, Bacău, România.
3. Borhan, A.I., Ghercă, D., Radu, I., Dirtu, A.C., **Dirtu, D.**, Palamaru, M.N., Popescu, D.M., Husanu, M.A., Iordan, A.R., Operative Solar Light-Driven Photocatalytic Degradation of Active Pharmaceutical Ingredients over sponge-like SrTiO<sub>3</sub>/NiFe<sub>2</sub>O<sub>4</sub> /MWCNTs Nanoheterostructures, 17th International Conference of Constructive Design and Technological Optimization in Machine Building, 25-27 Mai 2022, Bacău, România.
4. Gherca, D., Borhan, AI., Dirtu, AC., **Dirtu, D.**, Popescu, DG., Husanu, MA., Borca, CN., Stoian, G., Chiriac, H., Ababei, G., Lupu, N., Dual-functional photocatalysts for sustainable solar light- driven clean energy generation, IasiCHEM 2025 CONFERENCE 7th Edition, 30 - 31 October 2025, Iasi, Romania.

## **E. Brevete obținute în întreaga activitate**

1. L. Odochian, **D. Dirtu**, A. Pui, I. Humelnicu, C. Tănase, M. Dumitraș, L. Hîncu, "Procedeu și instalație de obținere a hidrazinei", Brevet de invenție, A/00612, 2006.

9 lucrări: C1 – C5, D 1 – 4

**Februarie 2026**