**CURRICULUM VITAE**

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**Education/Career:**

**1977** – Graduate of Faculty of Sciences Safarik University,Kosice

**1984** – PhD degree in the field of condensed matter physics at the Safarik University

**1989** – Senior research fellow at Institute of Experimental Physics SAS

**1991-2000** – Head of Department of Magnetism of Institute of Experimental Physics SAS

**1998** – Leading/research professor at Institute of Experimental Physics SAS

**Milan Timko**, leading scientific worker at Institute of Experimental Physics, Slovak Academy of Sciences. He graduated at Faculty of Sciences Safarik University, Kosice in solid state physics with specialization “Electric properties of amorphous alloys”. In 1984 he received his PhD degree in the field of condensed matter physics at the Safarik University with PhD thesis:”The influence of neutron radiation on electric and magnetic properties of amorphous alloys”. His research activity is devoted to research in solid state physics, magnetic, dielectric, magnetodielectric, magnetooptical and magnetorheological properties of magnetic nanoparticles, magnetic fluids, ferronematics and intermetallic compounds and their application in practice, physical properties of liquid crystals and their composites with various magnetic nanoparticles. Another part of the activity is covered by the searching of possibilities for biomedical and technical applications of studied materials. Application of magnetic fluids in biomedicine and in power transformers as cooling and isolative liquid. He is involved into the various international grant solution.

**Number of thesis supervised: 10** defended PhD students.

**Publication Scientific activity:** 1 book, 5 chapters in books, 11 patents,

 over 350 papers in high profile journals

 (total citations – over 3000, h-index - 28)

**List of selected publications in 2016-2021**

**1. Structure and viscosity of a transformer oil-based ferrofluid under an external electric field.**

Rajnak Michal, Timko Milan, Kopcansky Peter, Paulovicova Katarina, Tothova Jana, Kurimsky Juraj, Dolnik Bystrik, Cimbala Roman, Avdeev V. Mikhail, Petrenko I. Viktor, Feoktysov A., In Journal of Magnetism and Magnetic Materials, 2017, vol. 431, p. 99-102. <https://doi.org/10.1016/j.jmmm.2016.10.008> IF: 3.214,Quartile in Category: Q1

**2.Tuning the phase transition temperature of ferronematics with a magnetic field**

Toth-Katona, T; Gdovinova, V; Tomasovicova, N; Eber, N ; Fodor-Csorba, K ; Jurikova, A; Zavisova, V; Timko, M ; Chaud, X; Kopcansky, P , Soft Matter, Volume: 14, Issue: 9, Pages: 1647-1658, DOI: 10.1039/c7sm02383a ,Published: MAR 7 2018 IF: 3.889,Quartile in Category: Q1

**3. Structure characterization of the magnetosome solutions for hyperthermia study**

Molcan M., Petrenko V., Avdeev V.M., Ivankov O.I., Garamus V.M., Skumiel A., Jozefczak A., Kubovcikova M., Kopcansky P., Timko M., In Journal of Molecular Liquids, 2017, vol. 235, p. 11-16. <https://doi.org/10.1016/j.molliq.2016.12.054> IF: 5,854, Quartile in Category: Q1

**4. Heating Induced by Therapeutic Ultrasound in the Presence of Magnetic Nanoparticles**

Kaczmarek K., Hornowski T., Kubovcikova M., Timko M., Korolewski M., Jozefczak A., In ACS Applied Materials & Interfaces, 2018, vol. 10, no. 14, p. 11554-11564. <https://doi.org/10.1021/acsami.8b02496> IF: 9,229, Quartile in Category: Q1

**5. Toward apparent negative permittivity measurement in a magnetic nanofluid with electrically induced clusters**

Rajnak M., Spitalsky Z., Kurimsky J., Tomco L., Cimbala R., Kopcansky P., Timko M., In Physical Review Applied, 2019, vol. 11, no. 2, art. no. 024032, <https://doi.org/10.1103/PhysRevApplied.11.024032> IF: 4,931, Quartile in Category: Q1

**6. Particle assembling induced by non-homogeneous magnetic field at transformer oil-based ferrofluid/silicon crystal interface by neutron reflectometry**

Anatolii Nagornyi, Viktor I. Petrenko, Michal Rajnak, Igor V. Gapon, Mikhail V. Avdeev, B. Dolnik, Leonid A. Bulavin, Peter Kopcansky, Milan Timko, Applied Surface Science, 473 (2019) 912–917, https://doi.org/10.1016/j.apsusc.2018.12.197, IF: 4.439, Quartile in Category: Q1

**7. Statistical analysis of AC dielectric breakdown in transformer oil-based magnetic nanofluids.**

Rajnak M., Kurimsky J., Cimbala R., Conka Z., Bartko P. Suga M., Paulovicova K., Tothova J., Karpets M., Kopcansky P., Timko M., In Journal of Molecular Liquids, 2020, vol. 309, art. no. 113243. <https://doi.org/10.1016/j.molliq.2020.113243> IF: 5,854, Quartile in Category: Q1

**8. Controllability of ferrofluids' dielectric spectrum by means of external electric forces.**

Rajnak M., Dolnik B., Krempasky J., Cimbala R., Parekh K., Upadhay R.V., Paulovicova K., Kopcansky P., Timko M., In Journal of Physics D: Applied Physics, 2021, vol. 54, no. 3, art. no. 035303. <https://doi.org/10.1088/1361-6463/abbeb6> IF: 3.207 Quartile in Category: Q1

**9. Magnetic hyperthermia study of magnetosome chain systems in tissue-mimicking phantom**

Molcan M., Kaczmarek K., Kubovcikova M., Gojzewski H., Kovac J., Timko M., Jozevczak A., In Journal of Molecular Liquids, 2020, vol. 320, art. no. 114470. <https://doi.org/10.1016/j.molliq.2020.114470> IF: 5,854, Quartile in Category: Q1

**10. Dispersion of magnetic susceptibility in a suspension of flexible ferromagnetic rods.**

Molcan M., Kopcansky P., Timko M., Rajnak M., Gojzewski H., Cebers A., In Journal of Molecular Liquids, 2020, vol. 305, art. no. 112823<https://doi.org/10.1016/j.molliq.2020.112823> IF: 5,854, Quartile in Category: Q1

**11.Electrical discharges in ferrofluids based on mineral oil and novelgas-to-liquid oil**

Juraj Kurimsky, Michal Rajnak, Roman Cimbala, Katarina Paulovicova, Zbigniew Rozynek,

Peter Kopcansky, Milan Timko, Journal of Molecular Liquids 325 (2021) 115244, https://doi.org/10.1016/j.molliq.2020.115244, IF: 5,854, Quartile in Category: Q1

**12.Birefringence dispersion of 6CHBT liquid crystal determined in VIS-NIR spectral range**

Norbert Tarjányi , Marek Veveričík , Daniel Káčik , Milan Timko , Peter Kopčanský, Applied Surface Science 542 (2021) 148525, https://doi.org/10.1016/j.apsusc.2020.148525, IF: 6,612 Quartile in Category: Q1

**13. Cotton textile/iron oxide nanozyme composites with peroxidase-like activity: preparation, characterization, and application**

Ivo Safarik, Jitka Prochazkova, Martin A. Schroer,Vasil M. Garamus, Peter Kopcansky,Milan Timko, Michal Rajnak, Maksym Karpets, Oleksandr I. Ivankov, Mikhail V. Avdeev, Viktor I. Petrenko,Leonid Bulavin, and Kristyna Pospiskova, ACS Appl. Mater. Interfaces 2021, 13, 23627−23637, https://doi.org/10.1021/acsami.1c02154, IF: 8,758, Quartile in Category: Q1

**14.Controllability of ferrofluids’ dielectric spectrum by means of external electric forces**

Michal Rajnak, Bystrik Dolnik, Jakub Krempasky, Roman Cimbala, Kinnari Parekh, Ramesh Upadhyay, Katarina Paulovicova, Peter Kopcansky and Milan Timko, Journal of Physics D: Applied Physics, 54 (2021) 035303 (11pp), https://doi.org/10.1088/1361-6463/abbeb6, IF: 3,541,Quartile in Category: Q1