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Research interest:

- Solid state chemistry
- Heterogeneous catalysis and photocatalysis
- Materials chemistry
- Materials characterization

Technical skills:

- x- ray and neutron diffraction
- Rietveld analysis
- UV-VIS spectroscopy
- Fluorescent spectroscopy

Selected publications:

1. R. Kralchevska, M. Milanova, **M. Tsvetkov**, D. Dimitrov, D. Todorovsky. Influence of gamma-irradiation on the photocatalytic activity of Degussa P25 TiO₂. *Journal of Materials Science*, 47 (2012), 4936–4945, <https://doi.org/10.1007/s10853-012-6368-4>
2. P. Petrova, T. Tabakova, G. Munteanu, R. Zanella, **M. Tsvetkov**, L. Ilieva, Gold catalysts on Co-doped ceria for complete benzene oxidation: Relationship between reducibility and catalytic activity, *Catalysis Communications* 36 (2013) 84–88, <https://doi.org/10.1016/j.catcom.2013.03.010>

3. Z. Cherkezova-Zheleva, D. Paneva, **M. Tsvetkov**, B. Kunev, M. Milanova, N. Petrov, I. Mitov, Preparation of improved catalytic materials for water purification, *Hyperfine Interactions*, Vol. 226, Issue 1-3, 517- 527, <https://doi.org/10.1007/s10751-013-0976-5>
4. **M. Tsvetkov**, M. Milanova, L. C. J. Pereira, J. C. Waerenborgh, Z. Cherkezova-Zheleva, J. Zaharieva, I. Mitov. Magnetic properties of binary and ternary mixed metal oxides NiFe_2O_4 and $\text{Zn}_{0.5}\text{Ni}_{0.5}\text{Fe}_2\text{O}_4$, doped with rare earths by sol–gel synthesis. *Chemical papers*, 2016, vol. 70, issue 12, 1600- 1610, <https://doi.org/10.1515/chempap-2016-0097>
5. N. T. Temerbulatova, **M. P. Tsvetkov**, D. K. Karaivanov, A. I. Velichkov, D. V. Filosofov, M. M. Milanova, Rare earths doped ferrites, characterized by Time Differential $\gamma\gamma$ Perturbed Angle Correlations method, *Journal of Solid State Chemistry*, 277 (2019), 281- 289, <https://doi.org/10.1016/j.jssc.2019.05.029>
6. **M. Tsvetkov**, M. Milanova, I. Ivanova, D. Neov, Z. Cherkezova-Zheleva, J. Zaharieva, M. Abrashev, Phase composition and crystal structure determination of cobalt ferrite, modified with Ce, Nd and Dy ions by X-ray and neutron diffraction, *Journal of Molecular Structure*, 1179 (2019), 233- 241, <https://doi.org/10.1016/j.molstruc.2018.07.083>
7. **M. Tsvetkov**, J. Zaharieva, G. Issa, Z. Cherkezova- Zheleva, M. Nedyalkov, D. Paneva, T. Tsoncheva, M. Milanova, Cobalt ferrite modified with Hf(IV) as a catalyst for oxidation of ethyl acetate, *Catalysis Today*, 2019, in press, <https://doi.org/10.1016/j.cattod.2019.06.007>
8. **M. P. Tsvetkov**, I. R. Ivanova, E. P. Valcheva, J. Ts. Zaharieva, M. M. Milanova, Photocatalytic activity of NiFe_2O_4 and $\text{Zn}_{0.5}\text{Ni}_{0.5}\text{Fe}_2\text{O}_4$ modified by Eu(III) and Tb(III) for decomposition of Malachite Green, *Open Chemistry*, 17, 2019, 1124 – 1132, <https://doi.org/10.1515/chem-2019-0116>