

# Seznam publikací a jiných výsledků vědecké práce

Mariya Shamzhy Ph.D.

## Recenzované články v mezinárodních časopisech (cizojazyčné)\*<sup>1</sup> (WOS 25.03.2022)

1. R. Barakov, N. Shcherban, O. Petrov, J. Lang, **M. Shamzhy**, M. Opanasenko, J. Čejka. MWW-type zeolite nanostructures for a one-pot three-component Prins–Friedel–Crafts reaction. *Inorg. Chem. Front.*, 2022, 9(6) 1244-1257  
<https://doi.org/10.1039/D1QI01497H> IF = 6.5
2. T. Soták, Z. Magyarová, **M. Shamzhy**, M. Kubů, K. Gołabek, J. Čejka, M. Hronec. Gas-phase etherification of cyclopentanol to cyclopentyl methyl ether catalyzed by zeolites. *Appl. Catal. A*, 2021, 618, 118122,  
<https://doi.org/10.1016/j.apcata.2021.118122> IF=5.7
3. W. Zhang, Y. Zhou, **M. Shamzhy**, S. Molitorisová, M. Opanasenko, A. Giroir-Fendler. Total oxidation of toluene and propane over supported Co3O4 catalysts: Effect of structure/acidity of MWW zeolite and cobalt loading. *Appl. Mater. Interfaces*, 2021, 13, 15143–15158 <https://pubs.acs.org/doi/abs/10.1021/acsami.0c21999> IF=9.2
4. **M. Shamzhy**, B. Gil, M. Opanasenko, W. Roth, J. Čejka. MWW and MFI frameworks as model layered zeolites: structures, transformations, properties, and activity. *ACS Catal.*, 2021, 11, 2366 – 2396  
<https://pubs.acs.org/doi/10.1021/acscatal.0c05332> *přehledový článek IF = 13.0*
5. J. Zhang, O. Veselý, Z. Tošner, M. Mazur, J. Čejka, M. Opanasenko and **M. Shamzhy\***. Toward Controlling Disassembly Step within the ADOR Process for the Synthesis of Zeolites. *Chem. Mater.*, 2021, 33, 1228 – 1237  
<https://pubs.acs.org/doi/10.1021/acs.chemmater.0c03993> IF=9.8
6. Y. Zhang, A. Li, M. Sajad, K. Fulajtárová, M. Mazur, M. Kubů, **M. Shamzhy**, M. Hronec, R. Bulánek, J. Čejka. Imidazolium-type ionic liquid-assisted formation of the MFI zeolite loaded with metal nanoparticles for hydrogenation reactions. *Chem. Eng. J.*, 2021, 412, 128599 <https://www.sciencedirect.com/science/article/pii/S1385894721001972> IF=13.2
7. S. Gutiérrez-Rubio, **M. Shamzhy**, J. Čejka, D.P. Serrano, I. Moreno, J.M. Coronado. Vapor phase acylation of guaiacol with acetic acid over micro, nano and hierarchical MFI and BEA zeolites. *Appl. Catal. B*, 2021, 285, 119826  
<https://www.sciencedirect.com/science/article/pii/S0926337320312431> IF = 19.5
8. I. Podolean, J. Zhang, **M. Shamzhy**, V.I. Parvulescu, J. Čejka. Solvent-free ketalization of polyols over germanosilicate zeolites: the role of the nature and strength of acid sites. *Catal. Sci. Tech.*, 2020, 10, 8254 – 8264  
<https://pubs.rsc.org/en/content/articlelanding/2020/cy/d0cy01662d#!divAbstract> IF=6.1
9. M. Alonso-Doncel, A. Peral, **M. Shamzhy**, J. Čejka, R. Sanza, D.P. Serrano. Fine-tuning hierarchical ZSM-5 zeolite by controlled aggregation of protozeolitic units functionalized with tertiary amine-containing organosilane. *Micropor. Mesopor. Mater.*, 2020, 303, 110189 <https://www.sciencedirect.com/science/article/pii/S138718112030192X> IF=5.3
10. C. J. Heard, L. Grajciar, F. Uhlík, **M. Shamzhy**, M. Opanasenko, J. Čejka and P. Nachtigall. Zeolites (In)Stability Zeolites under Aqueous or Steaming Conditions. *Adv. Mater.*, 2020, 32, 2003264  
<https://onlinelibrary.wiley.com/doi/full/10.1002/adma.202003264> *přehledový článek IF=30.8*

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<sup>1</sup> \* - korespondenční autor, uvedena standardní dvouletá hodnota IF

11. M. Opanasenko, **M. Shamzhy**, Y. Wang, W. Yan, P. Nachtigall, J. Čejka. Synthesis and post-synthesis transformation of germanosilicate zeolites. *Angew. Chem. Int. Ed.*, 2020, 59 19380–19389  
<https://onlinelibrary.wiley.com/doi/full/10.1002/anie.202005776> *přehledový článek IF=15.3*
12. J. Zhang, Q. Yue, M. Mazur, M. Opanasenko, **M. Shamzhy\***, J. Čejka. Selective recovery and recycling of germanium for the design of sustainable zeolite catalysts. *ACS Sust. Chem. & Eng.*, 2020, 345, 8235–8246  
<https://pubs.acs.org/doi/10.1021/acssuschemeng.0c01336> **IF=8.1**
13. M. Alonso-Doncel, A. Peral, **M. Shamzhy**, J. Čejka, R. Sanz, D.P. Serrano. Untangling the role of the organosilane functional groups in the synthesis of hierarchical ZSM-5 zeolite by crystallization of silanized protozeolitic units. *Catal. Tod.*, 2020, 345, 27-38 <https://www.sciencedirect.com/science/article/pii/S0920586119306479> **IF=6.7**
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<https://www.sciencedirect.com/science/article/pii/S0920586119305620> **IF=6.7**
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<https://www.sciencedirect.com/science/article/pii/S0920586119305565> **IF=6.7**
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<https://www.sciencedirect.com/science/article/pii/S0920586119305425> **IF=6.7**
17. M. Liu, O. Veselý, P. Eliášová, **M. Shamzhy**, P. Lyu, L. Grajciar. Identification of the Most Active Sites for Tetrahydropyranlation in Zeolites: MFI as a test case. *Catal. Tod.*, 2020, 345, 165-174  
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18. M. Godino-Ojer, **M. Shamzhy**, J. Čejka, E. Pérez-Mayoral. Basolites: A type of Metal Organic Frameworks highly efficient in the one-pot synthesis of quinoxalines from  $\alpha$ -hydroxy ketones under aerobic conditions. *Catal. Tod.*, 2020, 345, 258-266 <https://www.sciencedirect.com/science/article/pii/S0920586119304237> **IF=6.7**
19. Y. Zhang, K. Fulajtárová, M. Kubů, M. Mazur, **M. Shamzhy**, M. Hronec, J. Čejka. Controlling dispersion and accessibility of Pd nanoparticles via 2D-to-3D zeolite transformation for shape-selective catalysis: Pd@MWW case. *Mater. Today Nano*, 8, 2019, 100056 <https://www.sciencedirect.com/science/article/pii/S2588842019301257> **IF=8.1**
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21. Y. Zhou, S. A. Kadam, **M. Shamzhy\***, J. Čejka, M. Opanasenko\*. Isorecticular UTL-Derived Zeolites as Model Materials for Probing Pore Size-Activity Relationships. *ACS Catal.*, 2019, 9, 5136–5146  
<https://pubs.acs.org/doi/10.1021/acscatal.9b00950> **IF = 13.0**
22. Q. Yue, J. Zhang, **M. Shamzhy**, M. Opanasenko. Seeded growth of isomorphously substituted chabazites in proton-form. *Micropor. Mesopor. Mater.*, 2019, 280, 331-336  
<https://www.sciencedirect.com/science/article/pii/S138718111930085X> **IF=5.3**

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<https://www.sciencedirect.com/science/article/pii/S0926860X19301279> IF=5.7
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<https://pubs.rsc.org/en/content/articlelanding/2019/cs/c8cs00887f#!divAbstract> *přehledový článek* IF=54.5
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29. M. Pitínová-Šteková, P. Eliášová, T. Weissenberger, **M. Shamzhy**, Z. Musilová, J. Čejka. Highly selective synthesis of campholenic aldehyde over Ti-MWW catalysts by  $\alpha$ -pinene oxide isomerization. Catal. Sci. Technol., 2018, 8, 4690-4701  
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<https://pubs.acs.org/doi/10.1021/cm200105f> **IF=9.8**
63. W.J. Roth, O.V. Shvets, **M.V. Shamzhy**, P. Chlubná, M. Kubů, P. Nachtigall, J. Čejka. Post-synthesis transformation of three-dimensional framework into a lamellar zeolite with modifiable architecture. J. Am. Chem. Soc., 2011, 133, 6130–6133  
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## **Recenzované články v národních časopisech (psané v češtině či slovenštině)**

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## **Vědecké monografie**

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## **Kapitoly v monografiích**

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## **Práce v recenzovaných sbornících**

-

## **Učebnice a učební texty**

-

## **Zvané přednášky**

Přednáška typu „*invited speaker*“ na konferenci „Workshop on Layered Materials“ (Třešť, 15 – 19 září, 2015) „TOP-DOWN SYNTHESIS OF ZEOLITIC LAYERS AND THEIR MANIPULATIONS“

## **Patenty národní a zahraniční**

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## **Kvalifikační práce**

Disertační práce „B-, Al-, Ga- and Fe-containing extra-large pore zeolites with UTL topology: synthesis, structure and catalytic properties“ (Kijev, Ukrajina, 2012)

## Rešení grantů

| Název                                                                                                                                                                                                                                          | Status/<br>Hodnocení<br>poskytovatelem                                               | Poskytovatel                                 | Roky realizace | Roli    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------|----------------|---------|
| Výzkum katalytické aktivity nových isomorfně substituovaných mikroporézních germanosilikátů<br><a href="https://starfos.tacr.cz/cs/project/GP14-30898P">https://starfos.tacr.cz/cs/project/GP14-30898P</a>                                     | Ukončený projekt<br>/<br>Vynikající výsledky projektu (s mezinárodním významem atd.) | Grantová agentura České republiky            | 2014–2016      | Řešitel |
| Pokročilá charakterizace aktivních center v nových zeolitových katalyzátorech<br><a href="https://starfos.tacr.cz/cs/project/GA20-12099S?query_code=4wvyaacigg2q">https://starfos.tacr.cz/cs/project/GA20-12099S?query_code=4wvyaacigg2q</a>   | Běžící víceletý projekt                                                              | Grantová agentura České republiky            | 2020–2022      | Řešitel |
| Od nano-úrovně po atomové inženýrství kyselých center pro selektivní heterogenní katalýzu<br><a href="https://starfos.tacr.cz/cs/project/LL2104?query_code=4rvqaacmy2ia">https://starfos.tacr.cz/cs/project/LL2104?query_code=4rvqaacmy2ia</a> | Začínající víceletý projekt                                                          | Ministerstvo školství, mládeže a tělovýchovy | 2021–2026      | Řešitel |

## \* Jiné závažné práce

Recenzent článků v impaktovaných časopisech (<https://publons.com/researcher/2966492/mariya-shamzhy/peer-review/>):

Catalysis Today (IF = 6.7): 5 recenzi

ACS Catalysis (IF = 13.0): 3 recenzi

ACS Applied Materials and Interfaces (IF = 9.2): 2 recenzi

Inorganic Chemistry Frontiers (IF = 6.1): 2 recenze

Scientific Reports (IF = 5.1): 1 recenze

RSC Advances (IF = 3.3): 1 recenze

The European Physical Journal Plus (IF = 4.1): 1 recenze

## \* Abstrakta z mezinárodních konferencí

1. IR Operando Study of Ethanol Dehydration over MFI Zeolites. / Shashikant A. Kadam, **Mariya V. Shamzhy** // 14th European Congress on Catalysis (EUROPACAT 2019). – August 18-23, 2019: abstr. – Aachen, Germany. – **2019**.
2. Accessing pore structure of IPC zeolites using carbon dioxide adsorption heats. / **M. Shamzhy**, A. Zukal, M. Kubů, J. Čejka // International Symposium on Zeolites and Microporous Crystals (ZMPC 2018). – September 5-9, 2018: abstr. – Yokohama, Japan. – **2018**. – PA011.
3. 3D and 2D MFI zeolites as acid catalysts: a comparative study. / **M.V. Shamzhy**, M. Opanasenko, J.-Ch. Kim, H. S. Shin, R. Ryoo, J. Čejka // 13th European Congress on Catalysis (EUROPACAT 2017). – August 27-31, 2017: abstr. – Florence, Italy. – **2017**.
4. Hierarchical zeolite-derived hybrids with adjustable organic pillars for catalytic application. / **M.V. Shamzhy**, M. Opanasenko, J. Čejka // 7th FEZA Conference “The ZEOLITES: Materials with Engineered Properties” – July 3-7, 2017: abstr. – Sofia, Bulgaria. – **2017**.

5. Fabrication of hybrid organic-inorganic materials with tunable porosity for catalytic application / **M. Shamzhy**, M. Opanasenko // 5th International conference on Multifunctional, hybrid and nanomaterials. – March 6-10, 2017: abstr. - Lisbon, Portugal – **2017**
6. Post-synthesis stabilization of germanosilicate zeolites by isomorphous substitution. / **M. Shamzhy**, M. Opanasenko, P. Eliašová // 18th International zeolite conference. – June 19 – 26, 2016: abstr. - Rio de Janeiro, Brazil - **2016**
7. Advantages of MOFs as catalysts: comparison with zeolites / **M.V. Shamzhy**, M.V. Opanasenko // 38th BZA Annual Meeting. – July 26-31, 2015: abstr. – Chester, UK. – **2015**. – P. 66.
8. Incorporation of 3-valent elements in germanosilicate zeolite ITH: direct vs. post-synthesis approach. / **M.V. Shamzhy**, C. Ochoa-Hernandez, M.V. Opanasenko // 6th Czech-Italian-Spanish Conference on Molecular Sieves and Catalysis. – June 14-17, 2015: abstr. – Amantea, Italy. – **2015**. – P. W2-2.
9. Advantages and perspectives of MOFs as catalysts: comparison with zeolites. / **M. Shamzhy**, M. Opanasenko // 6th International FEZA Conference. – September 8 – 11, 2014: abstr. – Leipzig, Germany – **2014**