



Prof. Dr. **Mustafa Kemal GUMUS**

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### EDUCATION

**Ph.D. 2002-2009** Yildiz Technical University, Institute of Science and Technology, Chemistry Department, Division of Organic Chemistry

Thesis Title: Cyclocondensation Reactions of Heteroaromatic Systems

**M.Sc. 1999-2002** Yildiz Technical University, Institute of Science and Technology, Chemistry Department, Division of Organic Chemistry

Thesis Title: Synthesis of Aryl Substituted Heterocyclic Compounds and Their Derivatives

**B.Sc. 1995-1999** Hacettepe University, Faculty of Education, Division of Science Education Chemistry Teaching

### CAREER/EMPLOYMENT

**February 2025-present time**, *Professor*, Artvin Coruh University, Artvin Vocational School, Laboratory Technology Department, Türkiye

**August 2019-February 2025**, *Associate Professor*, Artvin Coruh University, Artvin Vocational School, Laboratory Technology Department, Türkiye.

**April 2015-August 2019**, *Assistant Professor*, Artvin Coruh University, Faculty of Education, Science Education Department, Türkiye.

**Jully 2010-April 2015**, *Assistant Prof. Dr.*, Artvin Coruh University, Faculty of Arts and Science, Chemistry Department, Türkiye.

**February 2001- July 2010**, *Research Assistant*, Yildiz Technical University, Faculty of Art and Science, Chemistry Department, Division of Organic Chemistry, Türkiye

**September 2012-January 2013**, *Guest Researcher*, State Scientific Institution "Institute for Single Crystals" of National Academy of Sciences of Ukraine, Department of Heterocyclic Compounds Chemistry, Kharkiv, Ukraine (Council of Higher Education (YÖK) of Türkiye Scholarship)

**September 2010-October 2011**, *Postdoctoral Study*, University of Ioannina, Faculty of Science, Chemistry Department, Division of Organic Chemistry, Greece. (Hellenic State Scholarships Foundation (IKY) Scholarship)

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## INTERESTS RESEARCH

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- Chemistry of Heterocyclic Compounds
- Selective Oxidation Reactions With Mn(OAc)<sub>3</sub>
- Development of New Methods for Biological Active Compounds
- Multicomponent Reactions (MCRs),
- Modified Biginelli Reactions
- Synthesis of Bioactive Compounds
- Microwave- and ultrasound-assisted methods
- Antioxidant Compounds
- Antioxidant Activity
- Acetylcholinesterase Inhibitors
- Green Chemistry
- Medicinal and Aromatic Plants

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## SELECTED PUBLICATIONS

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### I. Articles in International Refereed Journals

1. Lipson, V. V., Shirobokova, M. G., **Gümüş, M. K.**, Ozturkcan, A., & Chebanov, V. A. (2025). Molecular Diversity of Lupane Hybrids in Drug Design and Materials Science. *Molecules*, 30(20), 4108. <https://doi.org/10.3390/molecules30204108>
2. Özokan, G., Bilginer, A., & **Gümüş, M. K.** (2025). Synthesis of Natural Carboxylic Acids and Alcohols from Cinnamon cassia Oil via Green Chemistry. *Processes*, 13(7), 2002. <https://doi.org/10.3390/pr13072002>
3. **Gümüş, M. K.**, Doğan, İ. S., Reis, R., Sipahi, H., Uba, A. I., & Gorobets, M. Y. (2024). Pronounced Anti-Inflammatory and Analgesic Activities of a Spiro-furan-Triazolo [1, 5-a] pyrimidine Scaffold Available via Biginelli Multicomponent Condensation. *ChemistrySelect*, 9(36), e202402286. <https://doi.org/10.1002/slct.202402286>
4. **Gümüş, M. K.**, Gorobets, M. Y., & Uludag, N. (2024). Microwave-Assisted synthesis of 5-Substituted 3-Amino-1, 2, 4-triazoles from aminoguanidine bicarbonate and carboxylic acids. *Processes*, 12(3), 573. <https://doi.org/10.3390/pr12030573>
5. **Mustafa Kemal Gümüş**, Sevgi Kansız, Ercan Aydemira, Nikolay Yu Gorobets, Necmi Dege "Structural features of 7-methoxy-5-methyl-2-(pyridin-3-yl)-11, 12-dihydro-5, 11-methano [1,2,4] triazolo [1,5-c][1,3,5] benzoxadiazocine: Experimental and theoretical (HF and DFT) studies, surface properties (MEP, Hirshfeld)." *Journal of Molecular Structure*. 2018 Volume 1168, pages 280-290.
6. **Mustafa Kemal Gümüş**, and Yiannis Elemes. "Eco-friendly synthesis of novel thiohydantoin-type sulfur-containing imidazolinone derivatives from glycine ester." *Chemistry of Heterocyclic Compounds*. 2018, 54(2), 153–157
7. **Mustafa K. Gümüş**, Nikolay Yu. Gorobets, Yuriy V. Sedash, Valentin A. Chebanov, Sergey M. Desenko "A modified Biginelli reaction toward oxygen-bridged tetrahydropyrimidines fused with substituted 1,2,4-triazole ring." *Chemistry of Heterocyclic Compounds*. 2017, 53(11), 1261–1267
8. **Mustafa K. Gümüş**, Nikolay Yu. Gorobets, Yuriy V. Sedash, Svitlana V. Shishkina, Sergey M. Desenko "Rapid formation of chemical complexity via a modified Biginelli reaction leading to dihydrofuran-2(3H)-one spiro-derivatives of triazolo[1,5-a] pyrimidine" *Tetrahedron Letters*, Volume 58, Issue 35 (2017) 3446–3448, doi: 10.1016/j.tetlet.2017.07.071