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Ahmad Shaabani (PhD, 1994, Tarbiat Modarres University, Tehran, Iran) is a full professor at Shahid Beheshti University, a member of the Academy of Sciences of the Islamic Republic of Iran, a fellow of The World Academy of Sciences (TWAS) for the advancement of science in developing countries and the member of International Core Academy of Sciences and Humanities. He currently serves as the president of the Chemistry & Chemical Engineering Research Center of Iran and is a former president of Shahid Beheshti University, Tehran. Prof. Shaabani is a member of the Iranian Chemical Society and serves on the editorial advisory board of *ACS Combinatorial Science* (ACS), the editorial board of the *Journal of the Iranian Chemical Society* (Springer), the editorial board of *Journal of Current Green Chemistry* (Bentham Science) and editorial board of the Quarterly Review of Basic Sciences (The Academy of Sciences of Islamic Republic of Iran). His primary research expertise lies in the discovery and development of novel isocyanide-based multicomponent reactions (I-MCRs) for the synthesis of biologically significant heterocyclic compounds. He also focuses on designing and preparing advanced functional materials such as modified nanomaterials and natural polymers via I-MCRs for applications in drug delivery and biomedical platforms. In addition, his work includes the synthesis of metallophthalocyanines and the development of new synthetic methodologies, particularly the use of heterogeneous catalysts in chemical transformations and carbon dioxide fixation. Prof. Shaabani has authored more than 350 scientific publications, including over ten review articles and several book chapters, and has delivered more than 100 presentations at national and international conferences.

He has held visiting research positions at the University of Regina, Canada, under Prof. Donald G. Lee, and at the University of California, Santa Cruz, under Prof. Shaowei Chen.

Prof. Shaabani has also participated in two international training programs, including:

- The UNIDO program on the Utilization of Medicinal and Aromatic Plants in Pharmaceutical and Related Industries (9 September–2 October 1996, Eskisehir, Turkey).
- The HIJ-COMSATS Workshop on Spectroscopic Techniques in Structural Organic Chemistry (14–21 February 2000, Karachi, Pakistan).

1-Education

B.Sc.: National University of Iran (Shahid Beheshti Univ.), Tehran, Iran (1985).

M.Sc.: Institute of Chemistry, Babolsar, Iran (Supervisor Dr. M. Ghalamkar-Moazzam) (1987).

Ph.D.: Tarbiat Modarres University, Tehran, Iran (Supervisor Prof. Issa Yavari) (1994).

2-Academic Experiences

Shahid Beheshti University, Tehran, Iran, Assistant Professor, 1994-1998

Shahid Beheshti University, Tehran, Iran, Associate Professor, 1998-2002

Shahid Beheshti University, Tehran, Iran, Professor of Organic Chemistry, 2002-

3-Honors/Awards

-Highly Cited Iranian Researchers in the Top 2% of the World: Citation Period 1996-2024,

- Highest-cited researcher at Shahid Beheshti University,

-Alborz prize (Alborz Foundation) for Selected Scientist 2021,

-Distinguished Professor selected by the Iran Elite Foundation, (First Festival of Allameh Tabatabaei Award), 2012,

-Iranian Chemical Society's Distinguished Chemist, 2010,

-Prize of the International Kharazmi Festival in Basic Science, 2009,

-Leading Scientists & Engineers of OIC Member States, 2008,

- Distinguished Professor of Iranian Universities (awarded by the Ministry of Science, Research and Technology of Iran) 2003,

-Listed among the Highly Cited Scientists and Engineers (ISI; top 1% by citation)

4-Memberships

-As a fellow of The World Academy of Sciences (TWAS) for the advancement of science in

developing countries, January 2021.

- As a member of The International Core Academy of Sciences and Humanities 2025.

-The Academy of Sciences, I.R. Iran,

-Member of Iranian Chemical Society,

-Member of Scientific Committee of the Chemistry Olympiad, Iran,

-Editorial Advisory Board of the ACS Combinatorial Science(ACS),

-Editorial board of the Journal of the Iranian Chemical Society(Springer),

-Editorial board of the Journal of Current Green Chemistry (Bentham Science),

- Editorial Board of the Quarterly Review of Basic Sciences: The Academy of Sciences (Islamic Republic of Iran).

5-Reviewer Article in Journals

Chemical Review, ACS Catalysis, Organic Letters, Journal of Organic Chemistry, ChemCatChem, Synlett, Synthesis, Journal of Molecular Catalysis A, ACS Combinatorial Science, Journal of Applied Organometallic Chemistry; Chemical Communications, Green Chemistry, Angewandted Chemie International Edition, Cellulose, Catalysis Communications, Chemistry Select, Journal of Chemical Education, Green Chemistry Letters and Reviews, Polycyclic Aromatic Compounds, Journal of Macromolecular Science, Part A, Molecular Diversity, Tetrahedron, Tetrahedron Letters, Journal of the Iranian Chemical Society, Journal of Research on Chemical Intermediates, RSC Advances, Carbohydrate, ChemistrySelect, ACS Sustainable Chemistry & Engineering, Iranian Journal of Chemistry and Chemical Engineering (IJCCE)

6-List of publications

6-1-Chapter Books(International)

- Shaabani, A.; Shaabani, Isocyanide-based Multicomponent Reactions. Lausanne: Frontiers Media SA, Edited by: S, Rudick, J. G., Dömling, A., Shaabani, S., 2020.
- Javanbakht, S., Shaabani, A., Nanoengineering of Biomaterials, Volume I – Drug Delivery, Edited by Sougata Jana and Subrata Jana, WILEY-VCH, 2022.
- Shaabani, A.; Sarvary, A.; Maleki, A. Zwitterions and Zwitterion-Trapping Agents in Isocyanide Chemistry, *in* Isocyanide Chemistry – Applications in Synthesis and Material Science, Ch. 8, Ed. Nenajdenko, V.; Wiley-VCH, 2012.
- Shaabani, A.; Sarvary, A.; Shaabani S. Reactions Involving Electron deficient Alkynes as Electrophilic Components, *in* Science of Synthesis Reference Library: Multicomponent Reactions, 1st Edition, Chapter 5, Ed. Thomas, J.J. Muller, Thieme Chemistry, 2013.

- Shaabani, A.; Sarvary, A.; Shaabani S. Reactions Involving an α,β -Unsaturated Carbonyl Compound as Electrophilic Component With Isonitrile Participation, in Science of Synthesis Reference Library: Multicomponent Reactions, 1st Edition, Chapter 6, Ed. Thomas, J.J. Muller, Thieme Chemistry, 2013.

6-2-Books in Farsi (Persian)

1-A. Shaabani and N. Davari Ardekani, Geography of Science, Islamic World Science Citation Database(ISC), 2.

2- A. Shaabani and N. Davari Ardekani, Knowledge, Universities and Development, Shahid Beheshti University (471), 2011.

3-A. Shaabani *et al.*, Basic Sciences Strategy and Action Plan, Ministry of Science Research and Technology, 2011.

4-A. Shaabani, Physical Organic Chemistry, Shahid Beheshti University (706), 2018.

5- A. Shaabani, The status of chemical sciences in the sustainable development of the knowledge base: An overview of scientific institutions, industry, economy, and society, Chemistry & Chemical Engineering Research Center of Iran, 2024.

6-3-Articles in Farsi (Persian)-In the field of scientific management

- [1] A. Shaabani and N. Davari Ardekani, The Remarks on Knowledge-Based Wealth Production, Procedures and Mechanisms, Science Cultivation, 4(1), 35-42, 2014.
- [2] A. Shaabani, Unemployment and the Emigration of Skilled Graduates, Science Cultivation, 7(1), 6-15, 2017.
- [3] A. Shaabani, Molecules That Will Change the Future, Science Cultivation, 8(2), 99-110, 2018.
- [4] A. Shaabani, Renovate University Collaboration with Industry, Science Cultivation, 9(1), 14-20, 2019.
- [5] A. Shaabani, Creativity and Discovery, Science Cultivation, 9(2), 54-62, 2019.
- [6] A. Shaabani, Chemical Outlook on Materials Genesis, Science Cultivation, 10(1), 11-16, 2020.
- [7] A. Shaabani, Education and Experimenting with At-Home During the COVID-19 Pandemic, Science Cultivation, 11(1), 28-36, 2021.
- [8] A. Shaabani, Investigation of Higher Education Planning with Emphasis on The Pathology of Basic Sciences, Science Cultivation, 11(2), 124-133, 2021.
- [9] A. Shaabani; P. Salehi; A. Saboury; J. Feyz; B. Karimi; A. Moosavi-Movahedi; R. Yousefi; MR. Vasheghani-Farahani, Outlooks on the Publishing of Research Paper in Scientific

Journals, Science Cultivation, 11(1), 2-27, 2021.

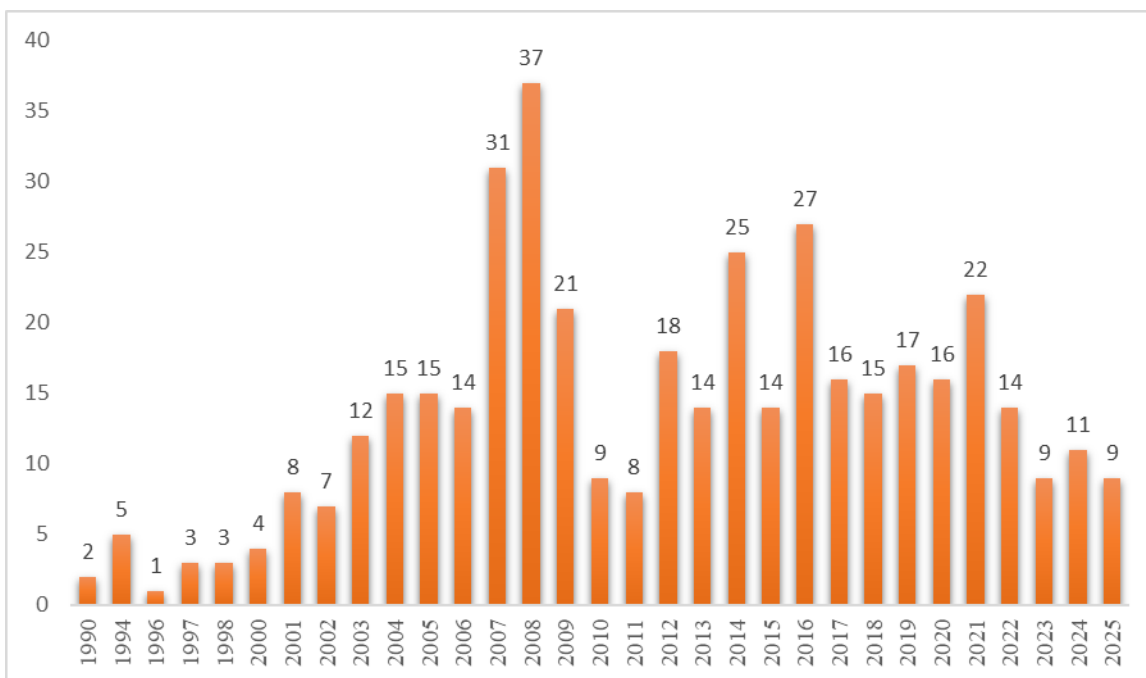
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- [13] A. Shaabani, Status of The Pharmaceutical Production Industry in Iran and the World, Science Cultivation, 12(2), 118-125, 2022.
- [14] A. Shaabani, Future Studies: The Status of Science, Technology and Innovation in Iran, the Region and the World, Quarterly Review of Basic Sciences, 5, 44-50, 2022.
- [15] A. Shaabani, Academy of World Sciences (TWAS) and Iran's Place in it, Quarterly Review of Basic Sciences, 5, 135-141, 2022.
- [16] A. Shaabani, The Need to Appraisal the Organizational Structure/ Function of Research Institutes to Increase Their Productivity and Efficiency in Society and Industry, Quarterly Review of Basic Sciences, 6, 22-40, 2022.
- [17] A. Shaabani, The Global Rank of Chemical Industries in terms of Gross Domestic Product of Countries, Quarterly Review of Basic Sciences, 8, 98-111, 2023.
- [18] A. Shaabani, Abdus Salam and His Role in the Advancement of Science in the World, Especially in Developing and Islamic Countries, Quarterly Review of Basic Sciences, 10, 7-18, 2023.
- [19] A. Shaabani, Performance Review of the Sixth Five-Year Development Plan in Higher Education, Science Cultivation, 15(1), 1-16, 2025.
- [20] A. Shaabani, Carbon dioxide: containment issues, effective management and optimal use in Iran, Science Cultivation, 15(1), 43-59, 2025.

6-4-Patents

1-Ahmad Shaabani and Nasser Safari, Synthesis of phthalocyanines and metallo-phthalocyanines using microwave irradiation (First report in the World), Pat. No. 25859, April 27, 1998(patent holder: Shahid Beheshti University).

2-Ahmad Shaabani and Neda Alae, Process for the production of dialkyl peroxy dicarbonates using active surfactants and air blowing, Pat. No. 92421, June 6, 2017(patent holder: Petrochemical Research and Technology Company of Iran and Shahid Beheshti University).

6-5-Selected Articles(International)



- (1) Amiri, A., Abedanzadeh, S., Khodabandehloo, M.H., Shaabani, A., Moosavi-Movahedi, A.A., Ligand Tricks for Faster Clicks: Bioconjugation via CuAAC Reaction, *Chemical Communications* (2025): <https://doi.org/10.1039/D5CC04435A>
- (2) Shaheed, N., Shaabani, A., A comprehensive review on the rational design of MOF-based heterogeneous catalysts for the classic Biginelli reaction, *Polyhedron* (2025): <https://doi.org/10.1016/j.poly.2025.117570>.
- (3) Nasiriani, T., Shaabani, A., Pectin-based magnetic molecularly imprinted polymer cross-linked *via* the Betti reaction and decorated by silver NPs (Fe₃O₄@MIP/ag): A safe and potential antibacterial nano-carrier for highly sustained release of tetracycline, *International Journal of Biological Macromolecules* (2025): <https://doi.org/10.1016/j.ijbiomac.2025.146015>.
- (4) Nazeri, M. T., Nasiriani, T., Torabi, S., Shaabani, A., Isocyanide-based multicomponent reactions for the synthesis of benzopyran derivatives with biological scaffolds, *Organic & Biomolecular Chemistry* (2024): <https://doi.org/10.1039/D3OB01671D>.

- (5) Nasiriani, T., Javanbakht, S., Shaabani, A., Kazeminava, F., Gelatin-based carbon quantum dot-molecularly imprinted polymer: Safe photoluminescent core-shell nano-carrier for the pH-responsive anticancer drug delivery, *International Journal of Biological Macromolecules* (2024): <https://doi.org/10.1016/j.ijbiomac.2024.134669>.
- (6) Nazeri, M. T., Ghasemi, M., Torabi, S., Shaabani, A., Functionalization of Poplar cotton via azido-Ugi reaction: as a green biocatalytic system for the chemical fixation of CO₂, *Cellulose* (2024): <https://doi.org/10.1007/s10570-024-05927-4>.
- (7) Nasiriani, T., Nigjeh, N. A., Torabi, S., Shaabani, A., MIL-88-NH₂ (Fe) conjugated pectin through a post-modification Ugi four-component reaction: A robust bio-based catalyst for the synthesis of cyclic carbonate via CO₂ fixation reaction, *Carbohydrate Polymers* (2024): <https://doi.org/10.1016/j.carbpol.2024.122418>.
- (8) Amiri, A., Abedanzadeh, S., Davaeil, B., Shaabani, A., Moosavi-Movahedi, A. A., Protein click chemistry and its potential for medical applications, *Quarterly Reviews of Biophysics* (2024): <https://doi.org/10.1017/S0033583524000027>.
- (9) Shaheed, N., Nasiriani, T., Shaabani, A., Post-synthetic modification of NH₂-tagged metal-organic framework: A selective, effective, and recyclable heterogeneous catalyst for CO₂ conversion into cyclic carbonates, *Journal of the Taiwan Institute of Chemical Engineers* (2024): 105679. <https://doi.org/10.1016/j.jtice.2024.105679>.
- (10) Nazeri, M. T., Ahmadi, M., Ghasemi, M., Shaabani, A., Notash, B., The new synthesis of pyrrole-fused dibenzo [b, f][1,4] oxazepine/thiazepines by the pseudo-Joullié–Ugi reaction via an unexpected route with high chemoselectivity, *Organic & Biomolecular Chemistry* (2023): <https://doi.org/10.1039/D3OB00250K>.

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- (14) Javanbakht, S., Shaabani, A., Stimuli-Responsive Bio-Based Quantum Dots in Biomedical Applications, *Nanoengineering of Biomaterials* (2022): <https://doi.org/10.1002/9783527832095.ch28>.
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- (16) Nazeri, M. T., Shaabani, A., Notash, B., Chemoselective synthesis of fully substituted pyrroles *via* a one-pot four-component isocyanide-based reaction, *Organic & Biomolecular Chemistry* (2021): <https://doi.org/10.1039/D0OB02339F>.
- (17) Darvishi, S., Javanbakht, S., Heydari, A., Kazeminava, F., Gholizadeh, P., Mahdipour, M., Shaabani, A., Ultrasound-assisted synthesis of MIL-88 (Fe) coordinated to carboxymethyl

cellulose fibers: A safe carrier for highly sustained release of tetracycline, *International Journal of Biological Macromolecules* (2021):

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