

Biljana M Smit, PhD

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Education

- Oct 2001 – May 2010* University of Kragujevac, Faculty of Science, Kragujevac, Serbia
Ph. D., Chemistry
- Oct 1998 – Dec 2000* University of Kragujevac, Faculty of Science, Kragujevac, Serbia
M. S., Chemistry
- Oct 1982 – Apr 1991* University of Kragujevac, Faculty of Science, Kragujevac, Serbia
B. Sc., Chemistry

Thesis

- 1. Reactions of tertiary Δ^4 - and Δ^5 -alkenols with some electrophilic reagents**
University of Kragujevac, Faculty of Science, Kragujevac, 2000
- 2. Influence of Lewis acids on phenylselenoetherifications and interactions with some H₂ antagonists**
University of Kragujevac, Faculty of Science, Kragujevac, 2010

Research Experience

present **Senior Researcher**
University of Kragujevac, Faculty of Science,
Kragujevac, Serbia

Statistics

RG Score 23.01

Publications 49

Total Impact Points 40.83

Reads 1,502

Citations 83

Awards & Grants

Skills & Activities

Skills Synthetic Organic Chemistry, Medicinal and Pharmaceutical Chemistry, Organometallics, Heterocyclic Chemistry, Structural Chemistry, Bioinorganic

Chemistry, Organic Chemistry, ¹H-NMR, Coordination Chemistry, NMR Spectroscopy, IR, ¹³C-NMR, Chemical Kinetics, Spectroscopy, Organic Synthesis, Cyclization, Synthesis, Nuclear Magnetic Resonance, Heterocyclic Compounds Synthesis, Stereochemistry, Metal Complexes, Hydantoins, Amino Acids, Multistep Synthesis, Column Chromatography, Small Molecule Synthesis

Languages English

Scientific Memberships Serbian Chemical Society
International multidisciplinary "SeS redox and catalysis" network

Interests

Publication Highlights

Books

1. Zorica M. Bugarčić, Biljana M. Mojsilović
Ciklizacije alkohola
Prirodno-matematički fakultet, Kragujevac, 2006

Book Chapters

Journal Publications

1. Ž. D. Bugarčić, B. M. Mojsilović and V. M. Leovac
Mechanism of the substitution reaction between dimethyl sulphoxide and trichloro(dimethyl sulphoxide)platinate(II). ¹H-NMR kinetic study
J. Serb. Chem. Soc., **61**, 659-663, 1996
2. Z. Bugarčić, S. Konstantinović and B. Mojsilović
Studies of the reactions of some benzenalkenyl ethers with benzenselenenyl halides
Ind. J. Chem., **38B**, 728-731, 1999
3. A. V. Teodorović, M. D. Joksović, S. K. Konstantinović, B. M. Mojsilović and M. Lj. Mihailović
Amino acid mediated borane reduction of ketones
Monatsh. Chem., **131**, 91-95, 2000
4. A. V. Teodorović, M. D. Joksović, S. K. Konstantinović, J. N. Milovanović and B. M. Mojsilović
Valine-mediated borane reduction of ketones
J. Serb. Chem. Soc., **65**, 549-553, 2000
5. Z. M. Bugarčić, B. M. Mojsilović, Lj. Marjanović and S. Konstantinović
Reaction of some alkenols with tetrachloromethane
Monatsh. Chem., **131**, 1091-1096, 2000
6. Z. Petrović, B. Mojsilović, Z. Bugarčić
Vitamin B₁₂-catalyzed conversion of some γ - and δ -bromoalkanols to polyhydroxy alkanols
J. Mol. Cat A: Chem., **172**, 267-269, 2001
7. S. Konstantinović, Z. Petrović, A. Spasojević, B. Mojsilović
Synthesis of C₇-C₁₆-alkyl glycosides: Part II - Synthesis of alkyl D-xylopyranosides in the presence

of tin(IV) chloride as a Lewis acid catalyst

Ind. J. Chem., **40B**, 614-618, 2001

8. S. Konstantinović, J. Predojević, B. Mojsilović, B. Dimitrijević, G. Milošević
Synthesis of C₇-C₁₆-alkyl glycosides: Part I - Synthesis of alkyl D-glucofuranosides in the presence of tin(IV) chloride as a Lewis acid catalyst
Ind. J. Chem., **40B**, 796-801, 2001
9. S. Konstantinović, J. Predojević, S. Gojković, Z. Ratković, B. Dimitrijević, B. Mojsilović
Synthesis of C₃-C₉-alkenyl 2,3-unsaturated glucosides from glucose and some alkenols
Ind. J. Chem., **40B**, 802-805, 2001
10. S. Konstantinović, J. Predojević, S. Gojković, B. Mojsilović, V. Pavlović
Synthesis of C₇-C₁₆-alkyl 2,3-dideoxy glucosides from glucose and fatty alcohols
Ind. J. Chem., **40B**, 1242-1244, 2001
11. B. M. Mojsilović, Z. M. Bugarčić
Pyridine-facilitated phenylselenoetherification of some tertiary alkenol
Heteroatom Chem., **12**, 475-479, 2001
12. Z. M. Bugarčić, J. D. Dunkić, B. M. Mojsilović
A simple, convenient and expeditious approach to cineol
Heteroatom Chem., **15**, 468-470, 2004
13. Z. M. Bugarčić, B. M. Mojsilović
An improved procedure for phenylselenoetherification of some Δ^5 -alkenols using pyridine, Ag₂O, and some Lewis acids as catalysts
Heteroatom Chem., **15**, 146-149, 2004
14. Z. M. Bugarčić, B. M. Mojsilović, V. M. Divac
Facile pyridine-catalyzed phenylselenoetherification of alkenols
J. Mol. Cat A: Chem., **272**, 288-292, 2007
15. B. Šmit, B. Petrović, S. Sovilj, D. Čanović, Ž. D. Bugarčić
Study of the reaction of cisplatin with ranitidine and nizatidine by means of ¹H NMR spectroscopy in D₂O
Monatsh. Chem., **139**, 1197-1202, 2008
16. B. Šmit, Z. Bugarčić
Phenylselenoetherification of some Δ^4 -alkenols facilitated by pyridine and some Lewis acids
J. Heterocyclic Chem., **47**, 1443-1446, 2010
17. A. Mijatović, B. Šmit, A. Rilak, B. Petrović, D. Čanović, Ž. D. Bugarčić
NMR kinetic studies of the interaction between [Ru(terpy)(bipy)(H₂O)]²⁺ and some sulfur-donor ligands
Inorg. Chim. Acta, **394**, 552-557, 2013
18. B. Šmit, R. Z. Pavlović, A. Radosavljević-Mihailović, A. Došen, M. G. Ćurčić, D. S. Šeklić, M. N. Živanović
Synthesis, characterization and cytotoxicity of palladium(II) complex of 3-[(2-hydroxy-benzilidene)-amino]-2-thioxo-imidazolidin-4-one
J. Serb. Chem. Soc., **78**, 217-227, 2013
19. B. Šmit, R. Z. Pavlović
Three-step synthetic pathway to fused bicyclic hydantoins involving a selenocyclization step
Tetrahedron, **71**, 1101-1108, 2015
20. M. Milutinović, M. Stanković, D. Cvetković, V. Maksimović, B. Šmit, R. Z. Pavlović, S. Marković
The molecular mechanisms of apoptosis induced by *Allium flavum* L. and synergistic effects with new-synthesized Pd(II) complex on colon cancer cells
J. Food Biochem., **39**, 238-250, 2015

21. B. Šmit, R. Z. Pavlović, D. A. Milenković, Z. S. Marković
Mechanism, kinetics and selectivity of selenocyclization of 5-alkenyl hydantoins: experimental and computational study
Beilstein J. Org. Chem, **11**, 1865-1875, 2015
22. B. Šmit, M. Rodić, R. Z. Pavlović
Synthesis of angularly fused (homo)triquinane type hydantoins as precursors of bicyclic α -prolines
Synthesis, **48**, 387-393, 2016

Patents

Conference Proceedings

1. Z. Bugarčić, B. Mojsilović, S. Konstantinović
Phenylselenoetherification of Some Tertiary Alkenols
1st International Conference of the Chemical Societies of the South-East European Countries, Halkidiki, Greece, Book of abstracts PO 167, 1998
2. A. Teodorović, M. Joksović, S. Konstantinović, J. Milovanović, B. Mojsilović, M. Lj. Mihailović
Valine-mediated Borane Reduction of Ketones
1st International Conference of the Chemical Societies of the South-East European Countries, Halkidiki, Greece, Book of abstracts PO 267, 1998
3. B. Mojsilović, Z. Bugarčić, S. Konstantinović
Ciklizacije nekih Δ^4 -alkenola pomoću PhSeX (X=Cl, Br) u prisustvu piridina
XXXIX Savetovanje Srpskog hemijskog društva, Beograd, Izvodi radova OH-11, 1999
4. D. Anđelković, Z. D. Petrović, Z. M. Bugarčić, B. M. Mojsilović
Redukcija nekih hlor- i bromalkanola katalizovana vitaminom B₁₂
XXXIX Savetovanje Srpskog hemijskog društva, Beograd, Izvodi radova OH-47, 1999
5. M. Gavrilović, B. Mojsilović, Z. Bugarčić
Pyridine-mediated Phenylselenoetherification of Some Alkenols by Using of Phenylselenenyl Halides
2nd International Conference of the Chemical Societies of the South-East European Countries, Halkidiki, Greece, Book of abstracts PO 531, 2000
6. M. Gavrilović, B. Mojsilović, S. Grujić, Z. Bugarčić
Pyridine-mediated phenylselenoetherification of some Δ^4 -alkenols
Conference "Situation and perspective of research and development in chemical and mechanical industry", Kruševac, Yugoslavia, Book 2: Chemistry, technology, education, 75-80, 2001
7. Z. Bugarčić, B. Mojsilović
Lewis acid catalysed phenylselenoetherification of some alkenols
4th International Conference of the Chemical Societies of the South-East European Countries, Belgrade, Serbia, Book of abstracts GT-P 117, 2004
8. Z. Bugarčić, S. Matić, B. Mojsilović
Base catalysed cyclizations of alkenols with PhSeX
XVIII Congress of Chemists and Technologists of Macedonia, Ohrid, Republic of Macedonia, Book of abstracts OCB 17, 2004
9. Z. Bugarčić, V. Karić, B. Mojsilović

- Phenylselenoetherification of some alkenols in the presence of Ag⁺ ions
XVIII Congress of Chemists and Technologists of Macedonia, Ohrid, Republic of Macedonia,
Book of abstracts OCB 16, 2004
10. Z. Petrović, B. Šmit
Selective reduction of some aromatic α,β -unsaturated carbonyl compounds catalyzed by vitamin B₁₂
5th International Conference of the Chemical Societies of the South-East European Countries,
Ohrid, Republic of Macedonia, Book of abstracts OCH 40, 2006
11. B. Šmit, Z. Bugarčić
Stereoselectivity in phenylselenoetherification of (*Z*)- and (*E*)-hex-4-en-1-ols facilitated by pyridine and some Lewis acids
13rd International Electronic Conference on Synthetic Organic Chemistry: Symposium on Selenium and Tellurium Chemistry, d004, 2009 **M33**
12. B. Šmit, R. Z. Pavlović, A. V. Teodorović, D. S. Šeklić, M. N. Živanović, N. Z. Đorđević, A. Radosavljević-Mihajlović
Sinteza, karakterizacija i citotoksična aktivnost liganda tiohidantoinskog tipa i njegovog paladijum(II) kompleksa
XL Savetovanje Srpskog hemijskog društva, Beograd, Izvodi radova OH P17, 2012
13. R. Z. Pavlović, B. Šmit
Selenociklizacija 5-metil-5-(4-metil-pent-3-enil)-imidazolidin-2,4-diona i njegovih N(3)-metil i benzil derivata
Prva konferencija mladih hemičara Srbije, Beograd, Izvodi radova HS P12, 2012
14. B. Šmit, R. Z. Pavlović
Synthesis of novel 5-(alk-3-enyl)-hydantoins
16th International Electronic Conference on Synthetic Organic Chemistry: General Organic Chemistry, a025, 2012
15. B. Šmit, R. Z. Pavlović
Selenocyclization of 5-methyl-5-(4-methyl-pent-3-enyl)-imidazolidine-2,4-dione
XXII Congress of Chemists and Technologists of Macedonia, Ohrid, Republic of Macedonia, Book of abstracts O-5, 2012
16. B. Šmit, R. Z. Pavlović
A facile three-step synthetic pathway to fused bicyclic hydantoins using selenocyclization step
17th International Electronic Conference on Synthetic Organic Chemistry: General Organic Synthesis, a019, 2013
17. Z. Petrović, B. Šmit, R. Z. Pavlović, Z. Marković, D. Milenković
Experimental, ¹H NMR and computational mechanistic study of selenocyclization of alkenyl hydantoins
XXIII Congress of Chemists and Technologists of Macedonia, Ohrid, Republic of Macedonia, Book of abstracts OCT-20, 2014
18. Z. Petrović, D. Simijonović, B. Šmit, V. P. Petrović
Synthesis and antioxidant activity of some phenolic Schiff bases
XXIII Congress of Chemists and Technologists of Macedonia, Ohrid, Republic of Macedonia, Book of abstracts OCT-21, 2014
19. B. Šmit, R. Z. Pavlović
Synthesis of angularly fused homotriquinane type tricyclic hydantoins
18th International Electronic Conference on Synthetic Organic Chemistry: General Organic

- Synthesis, a021, 2014
20. M. Ćurčić, M. Stanković, D. Cvetković, V. Maksimović, B. Šmit, R. Pavlović, S. Marković
The molecular mechanism of apoptosis, redox status and synergistic effects of *Allium flavum* L. extracts and new-synthesized Pd(II) complex on colon cancer cells.
Fourth Conference of Serbian Biochemical Society "Biochemistry - molecular life science", Belgrade, 2014
 21. B. Šmit, J. Milivojević, D. Krstić
Indeks zagađenosti teškim metalima za reku Uglješnicu, Srbija
III Memorijalni skup iz zaštite životne sredine "Docent dr Milena Dalmacija", V-3, Novi Sad, 2015
 22. R. Z. Pavlović, M. Rodić, B. Šmit
Synthesis of angularly fused (homo)triquinane type hydantoins as precursors of bicyclic α -prolines
Third Conference of Serbian Young Chemists, Book of Abstracts, HS P-22, Belgrade, Serbia, October 24, 2015.
 23. B. Šmit, Z. Simić, D. Ašanin, R. Z. Pavlović
Electrochemical selenium-initiated cyclization of alkenyl hydantoins
19th International Electronic Conference on Synthetic Organic Chemistry: General Organic Synthesis, a059, 2015