14.05.2024.

Curriculum Vitae
HRZZ Form

PERSONAL INFORMATION

Name and surname	**Vlasta Mohaček Grošev**
Academic title	PhD
Year and institution of PhD obtained	1995, University of Zagreb
Address	Bijenička cesta 54
Phone	+385-1-4561-020
E-mail	mohacek@irb.hr
Personal web page	https://www.irb.hr/Zavodi/Zavod-za-fiziku-materijala/Laboratorij-za-molekulsku-fiziku-i-sinteze-novih-materijala/Zaposlenici/Vlasta-Mohacek-Grosev
Citizenship	Croatian
Date and place of birth	11.12.1963. Zagreb

WORK EXPERIENCE[1]

Date (from – until)	*15.12.2010.-today*
Institution	*Ruđer BoškovićInstitute*
Position	senior research associate
Work field	application of vibrational spectroscopy to organic condensed matter
Date (from – until)	*29.05.2002.-15.12.2010.*
Institution	*Ruđer BoškovićInstitute*
Position	research associate
Work field	vibrational dynamics of hydrogen bonded systems
Date (from – until)	*01.12.1995.-29.05.2002.*
Institution	Ruđer BoškovićInstitute
Position	asistant with PhD
Work field	vibrational spectroscopy of mushrooms, phase transitions in organic systems
Date (from – until)	*17.7.1991. - 1.12.1995.*
Institution	*Ruđer BoškovićInstitute*
Position	research assistant
Work field	Raman spectroscopy of molecules with internal rotation
Date (from – until)	*1.06.1988.-17.7.1991*
Institution	*Ruđer BoškovićInstitute*
Position	assistant
Work field	Raman spectroscopy of molecules in vapour and gas phase

[1],[2],[3] Please add rows to enter all required information

EDUCATION[2] (CHRONOLOGICALLY)

Date	26.05.2022.
Institution	University Josip Juraj Strossmayer in Osijek
scientific advacement	Associate professor
Date	07.12.2017.
Institution	*Ruđer Bošković Institute*
Scientific advancement	Senior scientist
Date	24.11.2016.
Institution	*University Josip Juraj Strossmayer in Osijek*
scientific advacement	docent
Date	12.05.2006.
Institution	*Ruđer BoškovićInstitute*
scientific advacement	senior research associate
Date	29.05.2002.
Institution	*Ruđer BoškovićInstitute*
scientific advacement	research associate
Date	1. XII 1995. (defended PhD Thesis 16. XI 1995.)
Place	Zagreb
Institution	*Ruđer Bošković Institute*
Title of qualification awarded	PhD assistant
Date	24. 07. 1991. (defended Master of Science thesis 26. 06.1991.)
Place	Zagreb
Institution	Faculty of Science, Zagreb
Title of qualification awarded	scientific assistant
Date	01.06.1988. (defended B.Sc. in physics thesis on 11.05.1988.)
Place	Zagreb
Institution	*University of Zagreb, Faculty of Science*
Title of qualification awarded	started to work as an assistant
Date	1982.-1988.
Institution	Faculty of Science, Zagreb
Title of qualification awarded	B.Sc. in physics

LANGUAGES

MOTHER TONGUE	**Croatian**
Language	**ENGLISH LANGUAGE**
Speaking	**very good**
Writing	**good**
Reading	**very good**

LANGUAGES

Language	**German, French, Italian**
Speaking	fair
Writing	fair
Reading	good

RESEARCH AND OTHER PROJECTS
(CHRONOLOGICALLY; LEADER AND ASSOCIATES; FUNDING SOURCE)

2020 – 2023 collaborator in the Jaminno+ project „Development of new functional beverage in sustanaible packaging JamINNO+", leader Jamnica d.o.o. company, partner Ruđer Bošković Institute, call „Povećanje razvoja novih proizvoda i usluga koji proizlaze iz aktivnosti istraživanja i razvoja – faza II", KK.01.2.1.02

2015. – today works in Centre of Excellence for Advanced materials and Sensing Devices, head dr. Mile Ivanda, financed by Croatian government and European Union through European Regional Development Fund - The Competitiveness and Cohesion Opeartional programme (KK.01.1.1.01)

Leader of following projects:
2019-2022: Croatian-Slovenian bilateral project „Study of binding of biological molecules to substrate using surface-enhanced Raman (SERS) and surface enhanced infrared spectroscopy (SEIRS)"

2009-2010: Croatian-Slovenian bilateral project: Study of Preferential Conformations of Peptides in Solution Applying Vibrational Spectroscopy; Ministry of Science, Technology and Sport of the Republic of Croatia

2007-2008: Croatian-Slovenian bilateral project: Strong hydrogen bond: characterization and studying of its impact on enzymatic reactions and crystal engineering; Ministry of Science, Technology and Sport of the Republic of Croatia

2002-2006: «Sugar hydration dynamics» Ministry of Science and Technology of the Republic of Croatia

1998-2001: «Vibrational-spectroscopic characterization of mushrooms» Ministry of Science and Technology of the Republic of Croatia

Associate in following projects:
10.06.2020.-30.09.2023. „Development of new functional beverage in sustanaible packaging JamINNO+", leader Jamnica d.o.o., partner R. Bošković Institute, project call „Povećanje razvoja novih proizvoda i usluga koji proizlaze iz aktivnosti istraživanja i razvoja – faza II", oznaka KK.01.2.1.02

2015. – today works in Centre of Excellence for Advanced materials and Sensing Devices, head dr. Mile Ivanda, financed by Croatian government and European Union through European Regional Development Fund - The Competitiveness and Cohesion Operational programme (KK.01.1.1.01)

2007–2013 „Pysics and applications of nanostructures and bulk", proj. 098-0982904-2898 project leader: Dr.sc. Krešimir Furić and Mile Ivanda

1996-2002 „Light scattering, interactions and dynamics of matter", project no. 0980303, project leader: Dr.sc. Krešimir Furić

1991 – 1996 „Vibrational fenomena and interactions in condensed matter", project no 1-03-066, project leader: Dr.sc. Krešimir Furić

TEACHING
(CHRONOLOGICALLY; UNDERGRADUATE, GRADUATE , POSTGRADUATE STUDY PROGRAMMES

2017-2019 „Physics and Biophysics" , seminars, Faculty of Medicine, University of Zagreb

2019 – today lecturer «Spectroscopy methods for studying molecular vibrations», PhD study of physics at the Faculty of Science, University of Zagreb, field: Atomic and Molecular

Physics and Astrophysics
2013 – 2021 lecturer of „Selected chapters of molecular physics", for BSc students of physics at the Faculty of Science , University of Zagreb
2010 – 2019 lecturer «Molecular physics and spectroscopy», PhD study of physics at the Faculty of Science, University of Zagreb, field: Atomic and Molecular Physics and Astrophysics
2014 – summer semester, lecturer of „Physics 1", for BSc students of electrical engineering and computing at the Faculty od Electrical Engineering and Computing, University of Zagreb

2007 - today lecturer «Molecular spectroscopy of biological systems» at interdisciplinary study «Molecular biosciences» organized by University J. J. Strossmayer, Osijek; University of Dubrovnik and R. Bošković Institute
2003 – 2010 assistant «Molecular physics and spectroscopy», PhD study of physics at the Faculty of Science, University of Zagreb, field: Atomic and Molecular Physics and Astrophysics
1992/93 lecturer «Biophysical Chemistry» in the absence of Greta Pifat-Mrzljak, molecular biology students at the Faculty of Science, Zagreb
1991-95 assistant for «Biophysical Chemistry»,prof. Greta Pifat-Mrzljak, for molecular biology students at the Faculty of Science, Zagreb
1989 assistant General Physics II, prof K. Ilakovac, Faculty of Science, Zagreb

MENTORSHIP OF DEFENDED DOCTORAL AND MASTER DISSERTATIONS AND TRAINING OF YOUNG RESEARCHERS AND SCIENTISTS (CHRONOLOGICALLY)

Mentorship of diploma thesis: Sandro Brljafa, mag.edu.phys., Faculty of Science, Zagreb, 2021.
Mentorship of diploma thesis:Vladimir Šoštarić, B.Sc. Physics, Faculty of Science, Zagreb 2014.

AWARDS AND RECOGNITIONS (CHRONOLOGICALLY)

award of the director of Ruđer Bošković Institute for 2011.

ORGANIZATIONAL SKILLS AND COMPETENCES (CHRONOLOGICALLY; ORGANIZATION OF HOME AND INTERNATIONAL SCIENCE EVENTS)

2013 coordinator of the Organizing Committee of the Open days of the Ruđer Bošković Institute 18.- 20. April 2013.

2010 20th - 22nd May, organized workshop "Designing and applying computational tools for reliable prediction of metal oxides properties" within the European Science Foundation program "Molecular simulations in biosystems and material science"

2010 member of the Organizing Committee of the Open days of the Ruđer Bošković Institute 06.-08. May 2010.
2008 member of the Organizing Committee of the XXIX European Congress on Molecular Spectroscopy, Opatija, Croatia, 31.August – 5. September 2008.
2008 member of the Organizing Committee of the Open days of the Ruđer Bošković Institute 24. – 26. April 2008.

2008 member of the Advisory Committee of the conference „Molecular Simulations in Biosystems and Materials Science"

MEMBERSHIP IN SCIENCE ORGANIZATIONS AND BODIES

(CHRONOLOGICALLY; HOME AND INTERNATIONAL ORGANIZATIONS AND BODIES)

2015 – 2018 member of the Management Committee of the COST action BM1401 „Raman based applications for clinical diagnostics"
2013 – 2017 member of the COST action "Optical Nanospectroscopy" MP1302
2006 – 2011 member of the Steering Committee "Molecular Simulations in Biosystems and Materials Science" of the European Science foundation as Croatia representative by decision of the Croatian scientific Council
2003-2010 member of the group Women in Physics of the Croatian Physical Society
2009-2017 member of the Supervising Board of the Croatian Biophysical Society
1994 - 2021 member of the Croatian Physical Society
2003 - 2020 member of the Croatian Biophysical Society

COMMISSIONS, COMMITTEES, BOARDS AND WORK GROUPS

(CHRONOLOGICALLY; HOME AND INTERNATIONAL)

2015 – 2018 member of the Management Committee of the COST action BM1401 „Raman based applications for clinical diagnostics"
2011-2005 member of the Steering Committee of the programme "Molecular Simulations in Biosystems and Materials Science" of the European Science Foundation

Member of the pool of reviewers of Croatian National Science Foundation.

Member of the pool of reviewers of Ministry of Science and Education of the Republic of Macedonia.

COOPERATION WITH COMPANIES

(CHRONOLOGICALLY; HOME AND INTERNATIONAL)

2018- today contract with JADRAN – GALENSKI LABORATORIJ d.d. Rijeka
2017 – today commercial cooperation with „Belupo" company , Koprivnica
2008 dr K. Furić, V. Mohaček Grošev: Analysis for „Krka", Novo Mesto

Vlasta Mohaček Grošev, list of publications 26.04.2024.

PAPERS

(CHRONOLOGICALLY; RESEARCH BOOKS, HOME AND INTERNATIONAL RESEARCH JOURNALS, HOME AND INTERNATIONAL CONFERENCE PROCEEDINGS; **PLEASE WRITE THEIR IMPACT FACTOR**)

Total 803 citations, total 45 publications in WOS journals, average citations 17.46 per published article (Web of Science), h – index = 14 (Web of Science 24.04.2024.)

1. **V. Mohaček Grošev**: Low temperature Raman spectroscopy of tetrahydrofuran: phonon spectra compared to matrix isolation spectra in air. Crystals **14** (2024) 14050468, 11 pages, https://doi.org/10.3390/cryst14050468 .

2. U. Novak, A. Golobič, N. Klančnik, J. Stare, **V. Mohaček-Grošev**, J. Grdadolnik : Strong Hydrogen Bonds in Acetylenedicarboxylic Acid Dihydrate, Int. J. Molecular Sciences **23** (2022) 6164, 22 pages (IF 6.208, cited 0 times, Q1) https://doi.org/10.3390/ijms23116164

3. **Vlasta Mohaček Grošev**, Krešimir Furić, Vedran Vujnović: Raman study of water deposited in solid argon matrix, Spectrochimica acta Part A Molecular and Biomolecular Spectroscopy **269** (2022) 120770 (IF 4.831, cited 0 times, Q1) https://doi.org/10.1016/j.saa.2021.120770

4. **Vlasta Mohaček Grošev**, Sandro Brljafa, Marko Škrabić, Ivan Marić, Vesna Blažek Bregović, Vincenzo Amendola, Polona Ropret, Anita Kvaček Blažević : Glucosamine to gold nanoparticles binding studied using Raman spectroscopy, Spectrochimica acta Part A Molecular and Biomolecular Spectroscopy **264** (2022) 120326 (IF 4.831, cited 3 times, Q1) https://doi.org/10.1016/j.saa.2021.120326

5. **Vlasta Mohaček Grošev**, Marija Đuroković, Aleksandar Maksimović : Combining Raman Spectroscopy, DFT Calculations, and Atomic Force Microscopy in the Study of Clinker Materials, // Materials **14** (13) (2021) art.no. 3648 (14 pages).(IF 3.748, cited 1 times Q1). https://doi.org/10.3390/ma14133648

6. Guo, Shuxia ; Beleites, Claudia ; Neugebauer, Ute ; Abalde-Cela, Sara ; Afseth, Nils Kristian ; Alsamad, Fatima ; Anand, suresh ; Araujo-Andrade, Cuauhtemoc ; Aškrabić, Sonja ; Avci, Ertug ; Baia, Monica ; Baranska, Malgorzata ; Baria, Enrico ; Batista de Carvalho, Luis A. E. ; de Bettignies, Philippe ; Bonifacio, Alois ; Bonnier, Franck ; Brauchle, eva maria ; Byrne, Hugh J. ; Chourpa, Igor ; Cicchi, Riccardo ; Cuisinier, Frederic ; Culha, Mustafa ; Dahms, Marcel ; David, Catalina ; Duponchel, Ludovic ; Duraipandian, Shiyamala ; El- Mashtoly, samir F. ; Ellis, David I. ; Eppe, Gauthier ; Falgayrac, Guillaume ; Gamulin, Ozren ; Gardner, Benjamin ; Gardner, Peter ; Gerwert, Klaus ; Giamarellos-Bourboulis, evangelos J. ; Gizurarson, Sveinbjorn ; Gnyba, Marcin ; Goodacre, Royston ; Grysan, Patrick ; Guntinas-Lichius, Orlando ; Helgadottir, Helga ; **Mohaček Grošev, Vlasta** ; Kendall, Catherine ; Kiselev, Roman ; Kölbach, Micha ; Krafft, Christoph ; Krishnamoorthy, Sivashankar ; Kubryck, Patrick ; Lendl, Bernhard ; Loza-Alvarez, Pablo ; Lyng, Fiona M. ; Machill, Susanne ; Malherbe, Cedric ; Marro, Monica ; Marques, Maria Paula M. ; Matuszyk, Ewelina ; Morasso, Carlo Francesco ; Moreau, Myriam ; Muhamadali, Howbeer ; Mussi, Valentina ; Notingher, Ioan ; Pacia, Marta Z. ; Pavone, Francesco S. ; Penel, Guillaume ; Petersen, Dennis ; Piot, Olivier ; Rau, Julietta V. ; Richter, Marc ; Rybarczyk, Maria Krystyna ; Salehi, Hamideh ; Schenke-Layland, Katja ; Schlücker, Sebastian ; Schosserer, Markus ; Schütze, Karin ; Sergo, Valter ; Sinjab, Faris ; Smulko, Janusz ; Sockalingum, Ganesh D. ; Stiebing, Clara ; Stone, Nick ; Untereiner, Valérie ; Vanna, Renzo ; Wieland, Karen ; Popp, Jürgen ; Bocklitz, Thomas : Comparability of Raman Spectroscopic Configurations: A Large Scale Cross-Laboratory Study // Analytical chemistry, **92** (2020), 24; 15745-15756 (IF 8.008, cited 26 times, Q1). https://doi.org/10.1021/acs.analchem.0c02696

7. **Vlasta Mohaček Grošev**, Biserka Prugovečki, Stjepan Prugovečki: Structural characterization of β-glycolaldehyde dimer, **93** (2020) 15-22. (IF 0.659, cited 0 times, Q4). https://doi.org/10.5562/cca3606

8. Stefano Fornasaro, Monica Baia, Claudia Beleites, Hugh J. Byrne, Alessandro Chiadò, Mihaela Chis, Malama Chisanga, Amuthachelvi Daniel, Luís A.E. Batista de Carvalho, Gauthier Eppe, Guillaume Falgayrac , Hrvoje Gebavi, Fabrizio Giorgise Roy Goodacre, Kirsten Gracie, Pietro La Mannan, Stacey Laingm, Lucio Littio, Fiona M. Lyngg, Sam Mabbottm, Kamilla Malekp, Cedric Malherbei, Maria Paula M. Marquesh, Moreno Meneghetti, Elisa Mitri, **Vlasta Mohaček-Grošev**, Carlo Morasso, Howbeer Muhamadalil Pellegrino Musto, Chiara Novara, Marianna Pannico, Guillaume Penel, Olivier Piot, Tomas Rindzevicius, Elena Rusu, Michael S. Schmidt, Valter Sergo,u, Ganesh D Sockalingum, Valérie Untereiner, Renzo Vanna, Ewelina Wiercigroch, Alois Bonifacio: Surface Enhanced Raman Spectroscopy for quantitative analysis: results of a large-scale European multi-instrument interlaboratory study, Analytical Chemistry **92** (2020) 4053 – 4064. (IF 8.008, cited 28 times, Q1). https://pubs.acs.org/doi/10.1021/acs.analchem.9b05658

9. Ivana Cetina, Irina Pucić, **Vlasta Mohaček Grošev**, Ana Šantić : Amines used for low temperature curing of PDMS-based gel-networks impact γ-irradiation outcome, Radiation Physics & Chemistry **170** (2020) 108635, (IF 2.776, Q1, cit 6 times). https://doi.org/10.1016/j.radphyschem.2019.108635

10. **Vlasta Mohaček Grošev**, N. Baran : Vibrational dynamics of 1,3-propanediol in liquid, polycrystalline and glassy states: a Raman spectroscopic study, Spectrochimica acta Part A Molecular and Biomolecular Spectroscopy **226** (2020) 117567 (IF 4.831, cited 1 time, Q1.) https://doi.org/10.1016/j.saa.2019.117567

11. H. Gebavi, D. Ristić, N. Baran, L. Mikac, V. Mohaček-Grošev, M. Gotić, M. Ivanda : Silicon Nanowires as Sensory Material for Surface-Enhanced Raman Spectroscopy, SILICON **11** (2) (2019) 1151-1157.(IF 2.941, cited 1 time, Q4) https://doi.org/10.1007/s12633-018-9906-0

12. Hrvoje Gebavi, Davor Ristić, Nikola Baran, Lara Mikac, **Vlasta Mohaček Grošev**, Marijan Gotić, Mile Šikić, Mile Ivanda: Horizontal silicon nanowires for surface-enhanced Raman spectroscopy. // Materials Research Express. **5** (2018) 1.(IF 2.025, cited 5 times, Q4) https://doi.org/10.1088/2053-1591/aaa152

13. **Vlasta Mohaček Grošev**, Hrvoje Gebavi, Alois Bonifacio, Valter Sergo, Marko Daković, Danica Bajuk-Bogdanović: Binding of p-mercaptobenzoic acid and adenine to gold-coated electroless etched silicon nanowires studied by surface-enhanced Raman scattering. // Spectrochimica acta. Part A, Molecular and biomolecular spectroscopy. **200** (2018) ; 102-109.(IF 4.831, cited 3 times, Q1) https://doi.org/10.1016/j.saa.2018.04.016

14. Hrvoje Gebavi, Lara Mikac, Marijan Marciuš, Mile Šikić, **Vlasta Mohaček Grošev**, Tibor Janči, Sanja Vidaćek,Emina Hasanspahić, Enisa Omanović Miklićanin, Mile Ivanda: Silicon Nanowires Substrates Fabrication for Ultra-Sensitive Surface Enhanced Raman Spectroscopy Sensors, Croatica Chemica Acta. **90** (2017)1-4 (IF 0.659, cit.6 times, Q4) https://doi.org/10.5562/cca3127

15. **Vlasta Mohaček Grošev**, Martina Vrankić, Aleksandar Maksimović, Vilko Mandić: Influence of titanium doping on Raman spectra of nanaocrystalline ZnAl2O4, Journal of Alloys and Compounds **697** (2017) 90-95,(IF 6.371, cit. 19 times, Q1) https://doi.org/10.1016/j.jallcom.2016.12.116

16. Goranka Bilalbegović, Aleksandar Maksimović, **Vlasta Mohaček Grošev**: Missing Fe: hydrogenated iron nanoparticles, Monthly Notices of the Royal Astronomical Society Letters **466** (2017), L14-L18 (IF 5.235, cit. 6 times, Q1) https://doi.org/10.1093/mnrasl/slw226

17. Ivana Fabijanić; Dubravka Matković-Čalogović, Viktor Pilepić, Irena Ivanišević, **Vlasta Mohaček Grošev**, Krešimir Sanković: New investigations of the guanine trichloro cuprate(II) complex crystal. // Journal of molecular structure. **1128** (2017), 1; 317-324. (IF=3.841, cit 1 times, Q3). https://doi.org/10.1016/j.molstruc.2016.08.069

18. **V. Mohaček Grošev**, J. Grdadolnik, D. Hadži: Evidence of Polaron Excitations in Low Temperature Raman spectra of Oxalic Acid Dihydrate, J. Phys.Chem. A **120** (2016) 2789 – 2796. (IF 2.944, cited 6 times, Q2) https://doi.org/10.1021/acs.jpca.5b12577

19. **Vlasta Mohaček Grošev***, Vladimir Šoštarić, Aleksandar Maksimović: Raman spectroscopic evidence of low temperature stability of D,L-glycolic and L-(+)-lactic acid crystals, Spectrochimica Acta A: Molecular and Biomolecular Spectroscopy **140** (2015) 35-43 (IF 4.831, cited 3 times, Q1) https://doi.org/10.1016/j.saa.2014.12.048

20. Goranka Bilalbegović, Aleksandar Maksimović, **Vlasta Mohaček Grošev**: Do cement nanoparticles exist in space? Monthly Notices of the Royal Astronomical Society. **442** (2014) , 2; 1319-1325. (IF 5.235, cited 3 times, Q1) https://doi.org/10.1093/mnras/stu869

21. Krešimir Molčanov, Jernej Stare, Mikhail Vener, Biserka Kojić-Prodić, Gregor Mali, Jože Grdadolnik, **Vlasta Mohaček Grošev**: Nitranilic acid hexahydrate, a novel benchmark system of the Zundel cation in an intrinsically asymmetric environment: spectroscopic features and hydrogen bond dynamics characterised by experimental and theoretical methods. Physical Chemistry Chemical Physics. **16** (2014) ; 998-1007. (IF 3.945, cited 13 times, Q1) https://doi.org/10.1039/C3CP54026J

22. **Vlasta Mohaček Grošev***, Biserka Prugovečki, Stjepan Prugovečki, Neven Strukan: Glycolaldehyde dimer has axial hydroxyl groups in the stable crystal phase: Raman, infrared and X-ray study, Journal of Molecular Structure **1047** (2013) 209-215.(IF 3.841, cited 7 times, Q3). https://doi.org/10.1016/j.molstruc.2013.05.006

23. **Vlasta Mohaček Grošev***, Krešimir Furić, Hrvoje Ivanković: Observed bands in Raman and infrared spectra of 1,3-dioxolane and their assignments, Vibrational Spectroscopy **64** (2013) 101-107. (IF 12.382, cited 19times, Q3). https://doi.org/10.1016/j.vibspec.2012.11.007

24. **Vlasta Mohaček Grošev***, Ozren Gamulin, Blaženka Foretić: Vibrational analysis of 1-methyl-pyridinium-2-aldoxime and 1-methyl-pyridinium-4-aldoxime cations, Spectrochimica Acta A Molecular and Biomolecular Spectroscopy **78** (2011)1376-1379. (IF 4.831, cited 4 times, Q1). https://doi.org/10.1016/j.saa.2011.01.012

25. Jože Grdadolnik, **Vlasta Mohaček Grošev**, Robert L. Baldwin, Franc Avbelj: Population of the Three Major Backbone Conformations in 19 Amino-Acid Dipeptides, Proceedings of the National Academy of Sciences of the United States of America **108**(5) (2011) 1794-1798. (IF 12.779, cit. 93 times, Q1). https://doi.org/10.1073/pnas.1017317108

26. **V. Mohaček Grošev**, J. Grdadolnik, J. Stare, D. Hadži: Identification of Hydrogen Bond Modes in Polarized Raman Spectra of Single Crystals of α Oxalic Acid Dihydrate, J. Raman Spectrosc. **40** (11) (2009) 1605-1614. (IF 2.727, cit. 36 times, Q2)

27. **V. Mohaček Grošev**, K. Furić, H. Ivanković:Luminescence and Raman spectra of acetylacetone at low temperatures, J. Phys.Chem. A 111 (2007) 5820 - 5827. (IF 2.944, cit. 16 times, Q2)

28. **V. Mohaček Grošev**, K. Furić: Low temperature Raman study of bis(trimethylsilyl)acetylene, J. Mol. Struct. 834-836 (2007) 270-275. (IF 3.841, cit. 2 times, Q3)

29. **V. Mohaček Grošev**: Spectroscopic arguments for a new crystal phase of glycolaldehyde, J. Raman Spectroscopy 36 (2005) 453-461. (IF 2.727, cit. 5 times, Q2).

30. K. Furić, **V. Mohaček Grošev**, M. Hadžija: Development of cataract caused by diabetes mellitus; Raman study, J. Mol. Struct. **744-747C** (2005) 169-177. (IF 3.841 za 2011. cited 9 times, Q3)

31. **V. Mohaček Grošev**: Vibrational analysis of hydroxyacetone, Spectrochim. Acta A Molecular and Biomolecular Spect. 61(3)(2005) 477- 484. (IF 1.290, cit. 14 times, Q2)

32. **V. Mohaček Grošev**, R. Božac, G. J.Puppels: Vibrational spectroscopic characterization of wild growing mushrooms and toadstools, Spectrochim. Acta A **57**(14) (2001) 2815-2829. (IF 4.831, cit. 115 times, Q1)

33. **V. Mohaček Grošev**, D. Kirin: The origin of disorder in CH3HgX (X = Cl, Br and I) crystals investigated by temperature dependent Raman spectroscopy, Eur. Phys. J. B **20** (1) (2001) 85 – 90. (IF 1.398, cit 1 time, Q4).

34. **V. Mohaček Grošev**, K. Furić: Low temperature Raman study of dimethylacetylene, J. Mol. Struct. **482-483** (1999) 651 – 657. (IF 3.841 cit. 5 times, Q3)

35. **Mohaček Grošev**, F. Stelzer, D. Jocham: Internal rotation dynamics of nitromethane at low temperature, J. Mol. Struct. **476** (1-3) (1999) 181 - 189. (IF 3.841 cit. 13 times, Q3)

36. Th. S. Bican, H. W. Schroetter, V. Mohaček Grošev: The Raman spectra of toluene vapour, J. Raman Spectrosc. **26** (1995) 787 - 790. (IF 2.727, cit. 6 times, Q2)

37. **V. Mohaček Grošev**, H. W. Schroetter, J. Jonuscheit: Vibrational contribution to the internal rotation potential of toluene and nitromethane, J. Raman Spectrosc. **26** (1995) 137 - 147. (IF 2.727 cit. 6 times, Q2)

38. S. Musić, M. Gotić, S. Popović, K. Furić, **V. Mohaček**: Structural properties of lead vanadate glasses containing La3+ or Fe3+ ions, J. Mater. Sci. **29** (1994) 1227 - 1232. (IF 4.682 cit. 13 times, Q2).

39. K. Furić, M. Ivanda, J. Kučar-Kopić, **V. Mohaček**: Remarkable increase of organic particles in the atmosphere above Croatia, Spectrochim. Acta A Molecular and Biomolecular Spectroscopy **50** (13/14) (1994) 449 - 462. (IF 4.831, cit. 1 time, Q1).

40. K. Furić, **V. Mohaček**, M. Mamić: Methanol in matrix isolated, vapour and liquid phase: Raman spectroscopic study, Spectrochim. Acta A Molecular and Biomolecular Spectroscopy 49 (13/14) (1993) 2081 – 2087. (IF 4.831 cit. 18 times, Q1).

41. **V. Mohaček**, K. Furić, M. Dakkouri, M. Grosser: Stable and metastable solid phases of dicyclopropylacetylene, J. Phys. Chem. 96 (1992) 11042 - 11047. (IF 4.173, cit. 7 times, Q1).

42. S. Musić, K. Furić, Z. Bajs, **V. Mohaček**: Spectroscopic characterization of alkali borosilicate glasses containing tin ions, J. Mater. Sci. 27 (1992) 5269 -5275. (IF 4.682, cit. 12 times, Q2)

43. **V. Mohaček**, K. Furić: Bose peak and vibrational bands in Raman spectra of sodium borosilicate glass, Croat. Chem. Acta 65(1) (1992) 119 - 123. (I.F. 0.659, cit. 0 time, Q4)

44. K. Furić, **V. Mohaček**, M. Bonifačić, I. Štefanić: Raman spectroscopic study of H2O and D2O water solutions of glycine, J. Mol. Struct. 267 (1992) 39 - 44. (IF 3.841 cit 152 times, Q3)

45. **V. Mohaček**, K. Furić: Vibrational analysis of some cyclopropyl derivatives, J. Mol. Struct. 266 (1992) 321 - 326. (IF 3.841 cit 3 times, Q3)

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1. Mohaček Grošev, Vlasta; Furić, Krešimir.
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1. K. Furić, M. Ivanda, J. Kučar-Kopić, V. Mohaček:
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2. V. Mohaček Grošev, R. Božac:
Vibrational spectroscopic characterization of mushroom spores,
Spectroscopy of Biological Molecules: New Directions;
Proceedings of the VIIIth European Conference on the Spectroscopy of Biological Molecules, Twente, Nizozemska, 29.08 – 02.09. 1999., str 595 – 596.

3. D. Kirin, V. Mohaček Grošev:
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4. V. Mohaček Grošev, H. Ivanković: Electronic excitations in acetylacetone: are we seeing charge density waves? Recent developments in low dimensional charge density wave conductors; Biljaković, Katica ; Dumas, Jean ; Starešinić, Damir (ur.) Zagreb, 2006. 86-87.

PAPERS

(CHRONOLOGICALLY; RESEARCH BOOKS, HOME AND INTERNATIONAL RESEARCH JOURNALS, HOME AND INTERNATIONAL CONFERENCE PROCEEDINGS; **PLEASE WRITE THEIR IMPACT FACTOR**)

Oral contributions at conferences:

1. **V. Mohaček Grošev** Solar energy conversion materials characterization using computational and spectroscopic techniques, Workshop on Solar Energy materials Zagreb, Croatia, 09.-10. 05.2019.
2. **V. Mohaček Grošev:** Theory of Raman Spectroscopy on Molecules and Crystals, Training School in Raman spectroscopy, Zagreb, Croatia, 23.09.-25.09.2015
3. **V. Mohaček Grošev**, J. Grdadolnik, D. Hadži:Evidence of polaron bands in low temperature Raman spectra of oxalic acid dihydrate, XXI International Conference on "Horizons in Hydrogen Bond Research", Wroclaw, 13.09.-18.09.2015.
4. **V. Mohaček Grošev**, M. Đuroković: Vibracijsko-spektroskopijsko proučavanje kalcijevih oksida važnih u proizvodnji cementa, Peta radionica Sekcije za primijenjenu i industrijsku fiziku Hrvatskog fizikalnog društva Zagreb 16. – 17.12.2014.
5. **V. Mohaček Grošev**: How can Raman spectroscopy help in dating works of art, predavanje, IAEA Regional Training Course on Dating of Cultural Heritage Artefacts using Nuclear Analytical Techniques, Zagreb, 20. – 24. 05. 2013.
6. **V. Mohaček Grošev**: Vibracijska dinamika najjednostavnijih šećera, lecture Tat the Second scientific meeting of Croatian biophysicists in Zagreb 13. 06. 2003. Book of abstracts p.16. (ed. Vesna Svetličić).
7. **V. Mohaček Grošev**: Vodikova veza u derivatima dioksana izučavana vibracijskom sektroskopijom, lecture at the Fourth meeting of Croatian Physical Society 13. 11. 2003. in Zagreb. Abstract in Book of abstracts, p. 9. (ed. Krešimir Kumerički) Zagreb
8. **V. Mohaček Grošev**: "Vibrational spectroscopic characterization of mushrooms", VIIIth European Conference on the Spectroscopy of Biological Molecules, Twente, The Netherlands, 29.08 – 02.09. 1999.
9. **V. Mohaček** K. Furić: Bose Peak and Vibrational Bands in Raman Spectra of Sodium Borosilicate Glass, Fourth Yugoslav symposium on molecular sciences, Bled, 16.- 19. IV 1991.

Invited lectures:

1. **V. Mohaček Grošev**: Raman spectroscopy of organic molecules, invited lecture at the Institute for Protection of Cultural Heritage of Slovenia,Ljubljana, 20.10.2008.

2. **V. Mohaček Grošev**:
"Vibrational spectroscopic characterization of mushrooms" ,VIIIth European Conference on the Spectroscopy of Biological Molecules, Twente, The Netherlands, 29.08 – 02.09. 1999.

PAPERS

(CHRONOLOGICALLY; RESEARCH BOOKS, HOME AND INTERNATIONAL RESEARCH JOURNALS, HOME AND INTERNATIONAL CONFERENCE PROCEEDINGS; **PLEASE WRITE THEIR IMPACT FACTOR**)

Abstracts in conference proceedings:

1. K. Furić. V. Mohaček:
   Fazni prijelaz u 1,2- diciklopropilacetilenu,
   Tenth Yugoslav conference on general and applied spectroscopy,
   Ohrid 12-16. VI 1989, Abstracts, MS17.

2. V. Mohaček, K. Furić:
   Bose peak and vibrational bands in Raman spectra of sodium boro-silicate glass, Četrti jugoslavanski simpozij o molekularnih vedah, Bled 16 - 19. IV 1991. Abstracts, Pr-21.

3. V. Mohaček Grošev, K. Furić:
   Raman spectra of dimethylacetylene, XXIVth European Congress on Molecular Spectroscopy, Prag, 23. - 28. VIII 1998., str. 258, Izdavač ICT Press.

4. V. Mohaček Grošev:
   Raman study of polycrystalline dimethylacetylene, XXIVth European Congress on Molecular Spectroscopy, Prag, 23. - 28. VIII 1998., str. 259, Izdavač ICT Press.

5. D. Kirin, V. Mohaček Grošev:
   Raman scattering study of dynamics of the CH_3 group in CH_3HgX (X=Cl, Br and I) compounds, XXIVth European Congress on Molecular Spectroscopy, Prag, 23. - 28. VIII 1998., str. 201, Izdavač ICT Press.

6 V. Mohaček Grošev, D. Kirin:
   Istraživanje faznih prijelaza i kristalima živa(II) halogenida Ramanovom spektroskopijom Knjiga sažetaka, Drugi znanstveni sastanak Hrv.fizikalnog društva, Zagreb, 1-3.12.1999.

7. D. Kirin,V. Mohaček Grošev, J. Pirnat, Z. Trontelj, J. Lužnik:
   Mehanizam faznih prijelaza u kristalima CH3HgX; X= Cl, Br i I
   Knjiga sažetaka, Treći znanstveni sastanak Hrvatskog fizikalnog društva, Zagreb, 5.-7 prosinca 2001.

8. V. Mohaček Grošev: Vibrational analysis of glycolaldehyde and hydroxyacetone, Book of Abstracts, Xth European Conference on Spectroscopy of Biological Molecules, Szeged 30. VIII –4. IX 2003., Szalontai, Balasz; Kota, Zoltan (ur.), Szeged : JATEPress, 2003. str 124.

9. V. Mohaček Grošev, H. Ivanković:
   Vibrational study of different polymorphs of glycolaldehyde,
   Book of abstracts, XXVIIth European Congress on Molecular Spectroscopy, Krakow, 05.-10. IX 2004., Handke, Miroslaw; Hasik, Magdalena; Paluszkiewicz Czeslawa (ur.), Krakow, Wydawnictwo Naukowe "Akapit" Krakov.

10. K. Furić, V. Mohaček Grošev, M. Hadžija:
    Development of cataract caused by diabetes mellitus; Raman study.
    Book of abstracts, XXVIIth European Congress on Molecular Spectroscopy, Krakow, 05. – 10. IX 2004., Handke, Miroslaw; Hasik, Magdalena; Paluszkiewicz Czeslawa (ur.), Krakow, Wydawnictwo Naukowe "Akapit" Krakov.

11. S. Prugovečki, V. Mohaček-Grošev, N. Strukan:
    Crystal structure of glycolaldehyde solved from powder diffraction data,
    Book of abstracts, Fourteenth Croatian-Slovenian crystallographic Meeting, Vrsar, Hrvatska, 15.-17. 06. 2005., str. 32.

12. V. Mohaček Grošev, K. Furić:
    Low temperature Raman spectra of bis(trimethylsilyl)acetylene,
    XXVIII European Congress of Molecular Sectroscopy, 3.-8. IX 2006. Istanbul Turska, Book of Abstracts, str.142.

13. K. Furić, V. Mohaček Grošev:

Low temperature Raman study of water,
XXVIII European Congress of Molecular Sectroscopy, 3.-8. IX 2006. Istanbul Turska, Book of Abstracts, str.141.

14. V. Mohaček Grošev, K. Furić, J. Grdadolnik, J. Stare, D. Hadži:
Evidence of strong hydrogen bonding in monocrystals of oxalic acid dihydrate,
XIIth European Conference on Spectroscopy of Biological Molecules, Bobigny, Pariz, Francuska 1. - 6. IX 2007., From Molecules to Tissues, Book of Abstracts, str. 317.

15. V. Mohaček Grošev, J. Grdadolnik, J. Stare, D. Hadži:
Hydrogen Bonding in (COOH)2 •2H2O and (COOD)2•2D2O,
XXIXth European Congress on Molecular Spectroscopy, Opatija, Croatia, 31. VIII - 5. IX 2008.
16. B. Foretić, V. Mohaček Grošev, I. Picek:
Molecular dynamics of 1-methylpyridinium-4-aldoxime chloride,
2nd European Chemistry Congress, Torino, Italija, 16-20.09.2008.

17. V. Mohaček-Grošev, B. Foretić, S. Kovač:
Vibrational study of 1-methylpyridinium aldoxime chloride based on Raman and FT-IR spectra and b3lyp/6-31++G(d,p) calculation of 1-methylpyridinium aldoxime cation normal modes, 14th International Workshop on Computational Physics and Materials Science: Total Energy and Force Methods, International Centre for Theoretical Physics, Trieste, Italy 8.-10.I 2009.

18. V. Mohaček Grošev, K. Furić, J. Grdadolnik, D. Hadži:
Priroda vibracijskih pobuđenja u sistemima s jakom vodikovom vezom // Knjiga sažetaka / Hrvoje Buljan i Davor Horvatić ed.). Zagreb: Croatian Physical Society, 2009. 60-60.

19. V. Mohaček Grošev, J. Grdadolnik, D. Hadži:
In search of hydrogen bond potential: comparing experimental and calculated phonons of several molecular crystals. Book of Abstracts / Babić, Darko; Došlić, Nađa ; Smith, David ; Tomić, Sanja ; Vlahoviček, Kristijan (ed.).
Zagreb: Centre for Computational Solutions in the Life Sciences, 2009. 69-69.

20. V. Mohaček Grošev, A. Maksimović:
Modeliranje kristalnih struktura: teorija i eksperiment // Knjiga sažetaka / Gajović, Andreja, Tokić, Vedrana ; Zorić, Maja ; Maruščak, Tomislav (ed.).Zagreb : Croatian Physical Society, 2011. 100-100.

21. V. Mohaček Grošev, K. Furić:
Molecular dynamics of 1, 3-dioxolane // Book of Abstracts / Nielaba, Peter; Ciccotti, Giovanni; Dellago, Christian; Dijkstra, Marjolein (ed.). Konstanz: Universitaet Konstanz, 2011. 97-97.

22. K. Molčanov, B. Kojić-Prodić, J. Stare, G. Mali, J. Grdadolnik,V. Mohaček Grošev:
Proton dynamics of a Zundel ion in an aysmmetric environment // XXI Slovenian-Croatian Crystallographic Meeting, Book of Abstracts / Lah, Nina; Trdin, Miha; Leban, Ivan (ur.). Ljubljana, Slovenija : University of Ljubljana, 2012. 38-38.

23. V. Mohaček Grošev, V. Šoštarić:
Istraživanje niskotemperaturnih Ramanovih spektara glikolne i mliječne kiseline // Knjiga sažetaka/ Miroslav Požek (ed.)/ Primošten, Croatian Physical Society 2013., 75-75.

24. V. Mohaček Grošev, A. Maksimović, M. Vrankić, V. Dananić:
Istraživanje porijekla lluminiscentnih vrpci u ganitu ZnAl2O4 dopiranom titanom // Knjiga sažetaka/ Miroslav Požek (ed.)/ Primošten, Croatian Physical Society 2013., 119-119.

25. V. Mohaček Grošev, V. Šoštarić:
Low temperature dynamics of glycolic and lactic acid studied by Raman spectroscopy, Conference Book / Dai Zhabg, Monica Fleischer (ur.). Tuebingen : Eberhard Karls Universitaet Tuebingen, 2014. 88-88

26. V. Mohaček Grošev, Vlasta; Grdadolnik, Jože.
Comparative Raman study of hydrogen bonding in LiHC2O4·H2O, KHC2O4, NaHC2O4·H2O, and (COOH)2·6H2O XXIV International Conference on Raman Spectroscopy / Juergen Popp, Volker Deckert (ur.). Jena: Friedrich Schiller Universitaet, 2014. 223-223.

27. V. Mohaček Grošev: Razlikovanje polikristaliničnih faza Ramanovom spektroskopijom, Znanstveno-stručni skup o industrijskoj kristalizaciji, 23.01.2015. PLIVA Hrvatska.

28. V. Mohaček Grošev, A. Maksimović, A. Kvaček, P. Ropret:
Origin of intermolecular interactions determining the secondary structure of hyaluronic acid gel, 2nd Optical Nanospectroscopy Conference University College Dublin, Ireland, 17.03.- 20.03. 2015.

29. G. Bilalbegović, A. Maksimović, V. Mohaček- Grošev:
Hydrogenated iron nanoparticles in the ISM // 6 years of ISM-SPP 1573: What have we learned? / S. Walch (ur.). Cologne, Germany: University of Cologne, 2017. 114-114 (poster,međunarodna recenzija,sažetak,znanstveni).

30. I. Cetina, I. Pucić, V. Mohaček Grošev, A. Šantić:
γ-irradiated PDMS gel networks cured with selected amines, 14th Tihany Symposium on Radiation Chemistry, Siófok, Hungary, 25-30 May 2019.

31. V. Mohaček Grošev, M. Đuroković, M. Škrabić: Evolution of C-S-H phase in ordinary Portland cement studied by Raman spectroscopy // Solid State Science & Research Meeting Zagreb 27.-29. 06.2019. Book of Abstracts / Biliškov, Nikola (ur.).

OTHER RESEARCH ACTIVITIES

(CHRONOLOGICALLY; CHIEF EDITOR OR EDITOR OF RESEARCH BOOK, HOME AND INTERNATIONAL RESEARCH JOURNALS, HOME AND INTERNATIONAL CONFERENCE PROCEEDINGS AND OTHER)

referee for international research journals:

- Journal of Raman Spectroscopy (IF 3.514)
- Ceramics International (IF 3.830)
- Journal of Chemical Physics (IF 3.044)
- Carbohydrate Research (IF 2.044)
- Journal of Molecular Structure (IF 1.404)
- Journal of Organic Chemistry (IF 3.959)
- Acta Chimica Slovenica (IF 1.093)
- Acta Physica Polonica A (IF 0.604)
- Spectrochimica Acta A- Molecular and Biomolecular Spectroscopy (IF 4.098)
- Central European Journal of Medicine (IF 0.312)
- High Temperature Materials and Processes (IF 0.261)
- Materials (IF 3.057)
- Nanomaterials (IF 5.076)
- Croatica Chemica Acta (IF 0.766)
- Nova Science Publishers (book)
- Journal of Thermal Analysis and Calorimetry (IF 1.908)
- Macromolecular Symposia
- Crystal Engineering Communications (IF 3.49)
- Photonics (IF 2.676)
- Journal of Physical Chemistry (IF 2.727)

Member of the pool of reviewers of Croatian National Science Foundation.

Member of the pool of reviewers of Ministry of Science and Education of the Republic of Macedonia.

COMPUTER SKILLS

OTHER IMPORTANT SKILLS AND COMPETENCES

Equipment purchases, public contest:

2005. won purchase of optical cryostat CCS 350 Janis Research for low temperature Raman spectroscopy (Ministry of Science and Education of the Republic of Croatia)

2012. – today
proposed purchase of a combined Raman-AFM spectrometer within OZIP ("Open Scientific Research Platforms) proposal of the R. Bošković Institute for EU funds

Valid driver's license B category

ADDITIONAL INFORMATION AND NOTES

Total 46 publications, 45 indexed in Web of Scence, total number of citations 803, average citations 17.46 per published article (Web of Science), h – index = 14 (Web of Science 26.04.2024.)
married, mother of a daughter (born 1996.) and a son (born 2001.)