PERSONAL INFORMATION

Prof. Dr. Emir Turkušić
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Date of birth: 01.05.1954..

Place of birth: Jajce, Bosnia and Herzegovina

Emir Turkusic - Google Scholar

Citations 538 H-index 10 and10-index 8 10

EMPLOYMENT

Faculty of Science, University of Sarajevo

Department of Chemistry, Chair of General and Inorganic Chemistry
Zmaja od Bosne 35, 71 000 Sarajevo, Bosnia and Herzegovina
Dr. Emir turkušić, Full Professor in the field of General Chemistry

Faculty of Pharmacy and Health, University of Travnik

Full Professor in the subjects of Instrumental
Methods, Physical Chemistry and Materials in Dentistry
Full Professor in the doctoral study in the subject of Sensors and Biosensors

Education

1961 – 1969.	Elementary school, Berta Kučera, Jajce
1969 – 1973.	High school
1973 – 1980.	Study: Faculty of Technology and Metallurgy, Belgrade
1980.	Diploma thesis: Determination of mercury in fish products by atomic absorption spectroscopy - "cold vapor" method
1989 – 1991.	Postgraduate studies, Zagreb, Faculty of Technology and Chemical Engineering, Electrochemistry
1989 – 1991.	Postgraduate studies, Zagreb, Faculty of Technology and Chemical Engineering, Electrochemistry
1996 - 1997.	Postgraduate studies, Sarajevo - Zagreb, Faculty of Science Sarajevo, Physical Chemistry
	Master's thesis: "Electrochemical measurements of cathodic protection parameters as a criterion for assessing the corrosion process and protection efficiency"
1997-2001.	Dissertation completed at Karl-Franzens University in the period 1997-2001, Graz, Austria, within the framework of the international scientific research project "Development of new biosensors"
2001.	Defense of the doctoral dissertation "Development of some new amperometric biosensors"

Work experience

1992 – 1995.	Spent the war period in Sarajevo and was an active participant in the armed forces.
1996 - 1998.	Assistant in the field of general chemistry and physical chemistry, Faculty of Science, Sarajevo.
1998 - 2002.	Senior assistant in the field of general chemistry and physical chemistry, Faculty of Science, Sarajevo.
Until 2001.	Assistant Minister for Science in the Federal Ministry of Education, Science, Culture and Sports, engaged in teaching at the Faculty of Science. For the first time after the war, he initiated a series of activities in the field of promoting scientific research through the allocation of assistance for master's and doctoral studies and scientific research projects in the amount of about 1.5 million KM, through which about 200 young people engaged in science at faculties and institutes in the Federation of Bosnia and Herzegovina were assisted in scientific research work.
Since 2002.	Assistant professor in the subject of General Chemistry, engaged in teaching.
2003 - 2007.	Minister of Education and Science in the Government of Sarajevo Canton. He initiated activities for the drafting of the Law on Scientific Research Activities of Sarajevo Canton, which was adopted in 2004. The science policy in Sarajevo Canton has received high international recognition from the UNESCO Office in Venice through the "Guidelines for a Science and Research Policy in Bosnia & Herzegovina", which states that only in the Canton of Sarajevo is there a respectable fund and council for science that transparently allocates funds for scientific projects and other activities in the field of science development.
Since 2012.	Associate professor at the Faculty of Science and Mathematics.
Since 2018.	full professor at the Faculty of Science and Mathematics.

PERSONAL SKILLS Hobbies: Skiing, spearfishing, guitar, painting on canvas..

Mother language: Bosnian

Foreign languages

	UNDERSTANDING	SPEECH	WRITING
German	C2	C2	B2
English	B2	B2	A2

Levels: A1/2: Beginner - B1/2: Independent user - C1/2 Experienced user
Common European Framework of Reference for Languages

Computer work: Computer programs

PEDAGOGICAL ACTIVITY

Teaching process at the Faculty of Science and Mathematics, Sarajevo
General Chemistry I and II, General Chemistry for Physicists, Sensors and Biosensors, Sensor Technologies

Teaching process at other faculties:

Faculty of Mechanical Engineering in Sarajevo, Chemistry, Chemistry of wood and auxiliary materials

International University of Sarajevo - General Chemistry

Faculty of Dentistry - part of the course Materials in Dentistry.

Mentoring II and III cycles

09.06.2006. **Master's thesis**: „Some metal oxides as mediator for the amperometric determination of hydrogen peroxide“ Sabine Begić, Karl-Franzens Univerzitet, Graz, Austrija (Magistra rerum naturalium).

09.06.2008. **Master's thesis:** "Qualitative and quantitative in vitro analysis of the corrosion behavior of dental amalgams", Anita Bajsman. Faculty of Dentistry in Sarajevo in cooperation with Karl-Franzens University, Graz, Austria.

October 2017. **Master's thesis: candidate Belme Musakadić,** "Investigating the mediator properties of sodium dichlorobis(N-phenyl-5-chlorosalicylideniminato-N,O)ruthenate(III) complexes for the development of new sensors"

2017. year	**Doctoral dissertation by Safeta Redžić.** "Development of a new sensor based on Ru(III) complexes derived from substituted salicylaldehydes and phenolamines", Faculty of Science, Sarajevo
2017. year	**Doctoral dissertation of Mirha Pazalja**, "Development of a new sensor for thiol compounds based on dichloro-bis[N-phenyl-5-halogeno-salicyldeniminato-N,O]ruthenate(III) complex as an electron transfer mediator"

Study stays abroad

7.1996. 11.1997.	Graz University of Technology, Cathodic Protection of Underground Structures Karl-Franzens University Graz, Research work on the project, "Amperometric Biosensor for the Determination of Glucose Based on a Manganese Dioxide-Modified Carbon Paste Electrode"
2.3.1998.	Institut za fizikalnu hemiju univerziteta u Mannheimu, Njemačka, Elektrohemijske metode
8-9.10.1998.	Karl-Franzens University Graz, Austria, Research work on the project, "Amperometric Determination of Glucose with a MnO2 and Glucose Oxidase Bulk-Modified Screen Printed Carbon Ink Sensor"
Do 2000. Total 14 months	
07.2003.	Karl-Franzens Univerzitet Graz; Austria, Some metal oxides as mediators for sensors and biosensors (Project: Development of new sensors and biosensors)
06.2004.	Karl-Franzens Univerzitet Graz; Austria, Some metal oxides as mediators for sensors and biosensors (Project: Development of new sensors and biosensors)
07.2005.	Karl-Franzens Univerzitet Graz; Austria, Some metal oxides as mediators for sensors and biosensors (Project: Development of new sensors and biosensors)
01.2006.	University Pardubice, Cheh Republic

SCIENTIFIC FIELD

ELECTROCHEMICAL SENSORS AND BIOSENSORS

From 1997 to present, permanent member of the scientific research team of Prof. Dr. Kurt Kalcher at Karl-Franzens University, Graz, Austria, which resulted in the development of two world-unique amperometric biosensors for glucose and glutamate and a new two-enzyme method for the electrochemical determination of bound glucose as well as an original method for the electrochemical determination of vitamin C.

BIBLIOGRAPHY

PUBLICATIONS IN SCIENTIFIC JOURNALS

Papers indexed in Web of Science

1. Kahrović, Emira, Adnan Zahirović, Aleksandar Višnjevac, Irnesa Osmanković, **Emir Turkušić** and Harun Kurtagić. „Chalcone and Flavonol Copper(II) Complexes Containing Schiff Base Co-Ligand: Synthesis, Crystal Structures and Catecholase-like Activity.“ *Croatica Chemica Acta*, 91(2), (2018): 1-13.

2. Zahirović, Adnan, Emira Kahrović, Marina Cindrić, Sandra Kraljević Pavelić, Mirsada Hukić, Anja Harej, and **Emir Turkušić**. "Heteroleptic ruthenium bioflavonoid complexes: From synthesis to in vitro biological activity." *Journal of Coordination Chemistry* 70, no. 24 (2017): 4030-4053.

3. **Turkušić, Emir**, Safeta Redžić, Emira Kahrović, and Adnan Zahirović. "Electrochemical Determination of Adrenaline at Ru (III) Schiff Base Complex Modified Carbon Electrodes." *Croatica Chemica Acta* 90, no. 2 (2017): 1-8.

4. Kahrović, Emira, Adnan Zahirović, Šeherzada Kadrić, **Emir Turkušić**, Irnesa Osmanković, and Hurija Džudžević Čančar. "Structural feature of calf thymus deoxyribonucleic acid–ruthenium (III) interaction in aqueous solution by difference Fourier transformed infrared spectroscopy." *Spectroscopy Letters* 50, no. 8 (2017): 426-431.

5. Kahrović, Emira, Adnan Zahirović, Sandra Kraljević Pavelić, Emir Turkušić, and Anja Harej. "In vitro anticancer activity of binuclear Ru (II) complexes with Schiff bases derived from 5substituted salicylaldehyde and 2-aminopyridine with notably low IC50 values." Journal of Coordination Chemistry 70, no. 10 (2017): 1683-1697.

6. Redžić, Safeta, Emira Kahrović, Adnan Zahirović, and Emir Turkušić. "Electrochemical Determination of Dopamine with Ruthenium (III)-Modified Glassy Carbon and Screen-Printed Electrodes." Analytical Letters 50, no. 10 (2017): 1602-1619.

7. Pazalja, Mirha, Emira Kahrović, Adnan Zahirović, and Emir Turkušić. "Electrochemical sensor for determination of L-cysteine based on carbon electrodes modified with Ru (III) Schiff base complex, carbon nanotubes and Nafion." Int. J. Electrochem. Sci 11 (2016): 10939-52.

8. Kahrović, Emira, Adnan Zahirović, Emir Turkušić, and Sabaheta Bektaš. "A Dinuclear Ruthenium (II) Schiff Base Complex with Dissimilar Coordination: Synthesis, Characterization, and Biological Activity." Zeitschrift für anorganische und allgemeine Chemie 642, no. 6 (2016): 480-485.

9. Ljubijankić, Nevzeta, Adnan Zahirović, Emir Turkušić, and Emira Kahrović. "DNA binding properties of two ruthenium (III) complexes containing Schiff bases derived from salicylaldehyde: Spectroscopic and electrochemical evidence of CT DNA intercalation." Croatica Chemica Acta 86, no. 2 (2013): 215-222.

10. Turkusic, Emir, and Emira Kahrovic. "Development of new low potential amperometric sensor for L-cysteine based on carbon ink modification by Tetraethylamonium dichloro-bis [N-phenyl5-bromosalicylideniminato-N, O] ruthenat (III)." Technics Technologies Education Management, 7 3 (2012): 1300-1303.

11. Kahrovic, Emira, and Emir Turkusic. "New Ruthenium Complexes with Schiff Bases as Mediators for the Low Potential Amperometric Determination of Ascorbic Acid, Part II: Voltametric and Amperometric evidence of mediation with Bromoderivative of Tetraethylamonium dichloro-bis [N-phenyl-5-halogeno-salicylideniminato-N, O] ruthenat (III)." HealthMed6, no. 3 (2012): 1046-1049.

12. Kahrovic, Emira, Emir Turkusic, Nevzeta Ljubijankic, Shefket Dehari, Dije Dehari, and Anita Bajsman. "New Ruthenium Complexes with Schiff Bases as Mediators for the Low Potential Amperometric Determination of Ascorbic Acid, Part I: Voltametric and Amperometric evidence of mediation with Tetraethylamonium dichloro-bis [N-phenyl-5-hloro-salicylideniminato-N, O] ruthenat (III)." HealthMED 6, no. 2 (2012): 699-702.

13. Kahrovic, Emira, Mejra Bektasevic, and Emir Turkusic. "Ruthenium (III) Chloride complex with Salicylaldehyde: Synthesis, characterization and interaction with albumin and DNA." Technics Technologies Education Management 6, no. 3 (2011): 692-697.

14. Turkusic, Emir, Sabina Begic, Emira Kahrovic, and Kurt Kalcher. "Amperometric Determination of Glucose with FeO and Glucose Oxidase Bulk-Modified Screen-Printed Carbon Ink Biosensor." HEALTHMED 5, no. 5 (2011): 1117-1122.

15. Turkusic, Emir, Sabina Begic, Emira Kahrovic, and Kurt Kalcher. "Amperometric determination of hydrogen peroxide with FeO bulk-modified screen-printed carbon ink sensor." HealthMED 5 (2011): 949-955.

16. Turkusic, Emir, Emira Kahrovic, Becir Heljic, Azra Kudumovic, and Kurt Kalcher. "Determination of total inorganic arsenic in ground water samples in Canton Sarajevo with a Field Spectrometric Device based on Gutzeit reaction." HealthMED(2011): 990.

17. Turkusic, Emir, Josef Kalcher, Emira Kahrovic, Negussie W. Beyene, Helmut Moderegger, Emin Sofic, Sabina Begic, and Kurt Kalcher. "Amperometric determination of bonded glucose with an MnO2 and glucose oxidase bulk-modified screen-printed electrode using flow-injection analysis." Talanta 65, no. 2 (2005): 559-564.

18. Waryo, Tesfaye T., Sabina Begic, Emir Turkusic, Karel Vytras, and Kurt Kalcher. "Fe3O4modified thick film carbon-based amperometric oxidase-biosensor." Scientific papers of the University of Pardubice. Series A. Faculty of Chemical Technology 11 (2005): 265-279.

19. Waryo, T. T., S. Begic, E. Turkusic, K. Vytras, and K. Kalcher. "Metal oxide-based carbon amperometric H2O2-transducers and oxidase biosensors." Sensing in Electroanalysis (2005): 145-191.

20. Beyene, Negussie W., Petr Kotzian, Klemens Schachl, Hailemichael Alemu, Emir Turkušić, Amira Čopra, Helmut Moderegger, Ivan Švancara, Karel Vytřas, and Kurt Kalcher. "(Bio) sensors based on manganese dioxide-modified carbon substrates: retrospections, further improvements and applications." Talanta 64, no. 5 (2004): 1151-1159.

21. Schachl, Klemens, Emir Turkušić, Alena Komersová, Martin Bartoš, Helmut Moderegger, Ivan Švancara, Hailemichael Alemu, Karel Vytřas, Maria Jimenez-Castro, and Kurt Kalcher. "Amperometric determination of glucose with a carbon paste biosensor." Collection of Czechoslovak chemical communications 67, no. 3 (2002): 302-313.

22. Turkušić, Emir, Kurt Kalcher, Klemens Schachl, Alena Komersova, Martin Bartos, Helmut Moderegger, Ivan Svancara, and Karel Vytras. "Amperometric determination of glucose with an MnO2 and glucose oxidase bulk-modified screen-printed carbon ink biosensor." Analytical letters 34, no. 15 (2001): 2633-2647.

23. Turkusic, Emir, Vladimir Milicevic, Hamid Tahmiscija, Midhat Vehabovic, Sanela Basic, and Vesna Amidzic. "Amperometric sensor for L-ascorbic acid determination based on MnO2 bulk modified screen printed electrode." Fresenius' journal of analytical chemistry 368, no. 5 (2000): 466-470.

Works indexed in Scopus, Ebsco, CAS and other databases of similar level

1. *Eminovic, Izet, Emira Kahrovic, Aner Mesic, **Emir Turkusic**, Dzenana Kargic, Adnan Zahirovic, and Zana Dolicanin. "Cytogenotoxic effects of two potential anticancer Ruthenium (III) Schiff Bases complexes." Journal of Health Sciences 6, no. 2 (2016).*

2. *Kahrović, E., S. Bektaš, **E. Turkušić**, and A. Zahirović. "Evidence on antimicrobial activity of Sodium dichloro-bis [N-phenyl-5-chlorosalicylideneiminato-N, O] ruthenate (III) against gram positive bacteria." Der Pharma Chemica 8(6), (2016): 174-178.*

3. *Zahirović Adnan, **Turkušić Emir**, Kahrović Emira. "Bis(iminato)ruthenates(III): Correlation of Half-wave Potential and Hydrolysis Constant with Electronic Effects of Substituent", Bulletin of the Chemists and Technologists of Bosnia and Herzegovina 45, (2015) 1-8.*

4. *Sabina Begić-Hairlahović, Emira Kahrović, **Emir Turkušić**, „Synthesis, Caracterization and Interaction with CT DNA of Novel Cationic Complex Ru(III) with Indazole and Schiff Base Derived from 5-Chlorosalicylaldehyde", Bulletin of the Chemists and Technologists of Bosnia and Herzegovina 43 (2014) 15-20.*

5. *Bajsman A., **Turkušić E.**, Vuković A., Zukić S., Zukanović A., Kahrović E., „Analysis of metals released from dental amalgam alloy using indictivStomatological review 3 (1) (2014) 17-28. ely coupled plasma-mass spectrometry",*

6. *Kahrovic, Emira, Adnan Zahirovic, and **Emir Turkusic**. "Calf thymus DNA intercalation by anionic Ru (III) complexes containing tridentate Schiff bases derived from 5-X-Substituted salicyladehyde and 2-Aminophenol." Journal of Chemistry and Chemical Engineering 8, no. 4 (2014)*

7. **E. Turkušić**, V. Milićević, E. Kahrović et all., *"Amperometric sensor for determination of L-ascorbic acid based on carbon electrode modified by MnO_2",* Pharmacia, 1999, 14.

PUBLICATIONS AT SCIENTIFIC CONFERENCES

World and international conferences

1. Adnan Zahirović, Emira Kahrović, Marina Cindrić, **Emir Turkušić**, Irnesa Svraka. *Synthetic Approaches to First Ruthenium – Quercetin Complexes: Insight into Design, Reactivity towards CT DNA and Antioxidant Activity*. 13th European Biological Inorganic Chemistry Conference, Budapest, Hungary, August 28 – September 01 2016, Book of Abstracts, p. 301 (P148).

2. Emira Kahrović, Adnan Zahirović, Šeherzada Kadrić, **Emir Turkušić**. *Structural View on Ru(III)-CT DNA Interaction in Aqueous Solution by FTIR Spectroscopy*. 13th European Biological Inorganic Chemistry Conference, Budapest, Hungary, August 28 – September 01 2016, Book of Abstracts, p. 184 (P031).

3. Safeta Redžić, Emira Kahrović, Mithat Asotić, **Emir Turkušić**. *New amperometric sensor for dopamine in the presence of ascorbic acid using Sodium bis[N-2-oxyphenyl-5bromosaliciylideneiminato-ONO]ruthenate(III)/MWNTs/Nafion modified GC electrode*. Pure and Applied Chemistry International Conference, Bangkok, Thailand, February 2016, Book of Abstracts.

4. Mirha Pazalja, Emira Kahrović and **Emir Turkušić**, *Development of a new amperometric sensor for L-cysteine and 2,5-dimercapto-1,3,4-thiadiazole based on carbon electrode modified with sodium dichloro-bis[N-phenyl-5-bromosalicylideneiminato-N,O]ruthenate(III) complex*, Fifth Regional Symposium on Electrochemistry – South - East Europe (RSE- SEE), Pravets, Bulgaria, 7-11 June 2015, Book of Abstracts.

5. Adnan Zahirović, Sabaheta Bektaš, Ilda Graca, Maida Puška, **Emir Turkušić**, Emira Kahrović, *A new complex of Ru(III) with N-(2-pyridyl)salicylideneimine: DNA binding*

properties and activity against Staphylococcus Aureus, 12 th European Biological Inorganic Chemistry Conference, Zurich, Switzerlan, August 24-28, 2014, J. Biol. Inorg. Chem. (2014), 19 (Suppl 2), S790.

6. Adnan Zahirovic, Sabina Begic-Hairlahovic, Nevzeta Ljubijankic, **Emir Turkusic**, Emira Kahrovic, *The Spectroscopic characterization of some Ru(III) complexes with Schiff bases derived from salicylaldehyde and investigation of interaction with CT DNA*, International Turkish Congress on Molecular Spectroscopy, Istanbul, Turkey, September 15-20, 2013, Book of Abstracts, Applied Spectroscopies – P7, p. 88.

7. Emira Kahrović, **Emir Turkušić**, Nevzeta Ljubijankić, Sabina Begić, Vera Dugandžić and Adnan Zahirović *"The Spectroscopic Investigations of a Ruthenium Schiff Base Complex with CT DNA"*, 40 International Congress on Coordination Chemistry, Valencia, Spain, September 9-13, 2012. Book of Abstracts, MS.D2.P.601, C404-C405.

8. A.Bajsman, M. Malić, E. Kahrović, S. Begić, A. Konjhodžić - Prcić, **E. Turkušić** and K. Kalcher, *"Electrochemical analysis of corrosion behaviour of dental amalgams"*,12th International Conference on Electroanalysis, ESEAC 2008 Prague, June 16-19, 2008.

9. Kurt Kalcher, Petr Kotzian, Sabina Begic, **Emir Turkusic**, and Karel Vytras; Heterogenous Carbon Electrodes. 12th International Conference on Electroanalysis, ESEAC 2008 Prague, June 16-19, 2008.

10. K. Kalcher, **E. Turkusic**, Karel Vytras, Sabina Begic, Petr Kotzian and Tesfaye Tadese. The 6th East Asia Conference on Chemical sensors EACCS-6 Nov. 6-9, 2005 Guilin, China, "Heterogeneous Carbon Sensors and Biosensors", Tsinghua University.

11. Tesfaye T. Waryo, Sabina Begic, **Emir Turkusic**, Karel Vytras, Kurt Kalcher *Fe_3O_4 modified carbon as H_2O_2 transducer for amperometric biosensors*, 8th Symposium on Instrumental Analysis, September 25-28, 2005, Graz, Austria.

12. K. Kalcher, T. Wodayo, S. Begic, **E. Turkusic**, K. Vytras and P. Kotzian, *Amperometric sensors and biosensors based on heterogenous carbon electrodes modified with metal oxides*, 8th symposium on Instrumental Analysis, September 25-28, 2005, Graz, Austria.

13. Sabina Begic, Tesfaye Tadesse Waryo, **Emir Turkusic** and Kurt Kalcher; Iron Oxide Fe_3O_4 as a Mediator for the Amperometric Determination of Hydrogen Peroxide, YISAC 2004, June 30July 3, 2004., Karl-Franzens University, Graz, Austria.

14. Kurt Kalcher, K. Vytras, Ivan Svancara, **Emir Turkušić**, and P. Kotzian, *Heterogeneous Carbon Sensor*, Egypt. 4th International Conference on Electrochemistry ICE IV, February 16-19 (2004), Assuan, Egypt (invited lecture).

15. Negussie W. Beyene, Petr Kotzian, Klemens Schachl, Hailemichael Alemu, **Emir Turkušić**, Amira Chopra, Helmut Moderegger, Ivan Svancara, Karel Vytras and Kurt Kalcher;
(Bio)Sensors Based on Manganese Dioxide-Modified Carbon Substrates: Retrospections, Further Improvements and Applications, Presented at the 12th International Conference on Flow Injection Analysis, Merida (Venezuela), Dec 7-13, 2003.

16. **E. Turkušić**, E. Kahrović, E. Sofić, S. Begić, K. Kalcher, *"Amperometric determination of glutamate with nafion film immobilized glutamate oxidase and manganese dioxide bulkmodified screen printed electrode"*, Annual Meeting of the International Society of Electrochemistry (ISE), Sao Paolo, Brasil, August 31 to September 5th, 2003.

17. **E. Turkušić**, E. Kahrović, E. Sofić, S. Begić, K. Kalcher, *"Amperometric determination of glutamate with nafion film immobilized glutamate oxidase and manganese dioxide bulkmodified screen printed electrode"*, Annual Meeting of the International Society of Electrochemistry (ISE), Sao Paolo, Brasil, August 31 to September 5th, 2003

18. **E. Turkušić**, J. Kalcher, E. Kahrović, K.Kalcher, E. Omanović *"Amperometric Determination of Bonded-Glucose With a MnO_2 and Glucose Oxidase Double Bulk-Modified Screen Printed Electrode and glucosidase from Aspergillus nigger Using Flow Injection Analysis"*, Elsevier Science Oxford, The Seventh World Congress on Biosensors, Kyoto, Japan, 15-17 May 2002

19. Kurt Kalcher, Karel Vytras, Negussie W Beyene, **Emir Turkusic**, Amira Čopra, *Sensors and biosensors based on heterogeneous carbon electrodes modified with manganese dioxide*, Elsevier Science Oxford, The Seventh World Congress on Biosensors, Kyoto, Japan, 15-17 May 2002.

20. **Emir Turkušić**, Kurt Kalcher and Amira Čopra, *Amperometric Determination of Glutamate Using an Manganese Diokside Bulk Modified Screen-Printed Electrode With a Nafion®-Film Immobilised Glutamate Oxidase*, YISAC 2001, July 2-5, 2001., Department of Analytical Chemistry University of Pardubice, Czech Republic.

21. Amira Čopra, Kurt Kalcher, **Emir Turkušić**, and Milka Maksimović, *Development of an Amperometric Sensor for the Determination of Uric Acid*, YISAC 2001, July 2-5, 2001, Department of Analytical Chemistry University of Pardubice, Czech Republic.

22. **Emir Turkušić**, Vladimir Milićević, Zdravko Pujić, Midhat Vehabović and Jasminka Turkušić, *Amperometric Determination of L-Ascorbic Acid Using Sensor Based on MnO2 Bulk Modified Carbon Ink Screen-Printed Electrode in Hydrodinamic Mode*, Second Croatian Congress on Pharmacy with International Participation, Cavtat, May 31 to June 3, 2001.

23. **Emir Turkušić** and Kurt Kalcher, *Amperometric determination of bonded-glucose with an MnO2 and glucose oxidase double bulk modified screen printed electrode and glucosidase from aspergillus niger using flow injection analysis*, YISAC 2000, Karl-Franzens University, Institute for Analytical Chemistry, July 2-5, 2000. Graz, Austria.

24. Kurt Kalcher, Karel Vytras, Ivan Svancera, Alena Komersova, **Emir Turkušić** and Esma Ruždić, *Some Recent Developments of Voltammetric Sensors Based on Hetereogeneous Carbon Matrices, Modern Electroanalytical Methods*, An International Conference to Mark the
40th Anniversary of the Award of the Nobel Prize to Professor Jaroslav Heyrovsky, September 19-23, 1999. Seč, Czech Republic.

25. K. Kalcher, K. Vytras, I. Svancara, A. Komersova, **Emir Turkušić**, „*Electrochemical Sensors Based on Modified Carbon Electrodes"*, ELACH4, 4. Vortragstagung des Arbeitskreises Elektrochemische Analysenmethoden der Gesellschaft Deutscher Chemiker, RostockWarnemünde, D, September 13-17, 1999 (invited plenary lecture).

26. Klemens Schachl, Hailemichael Alemu, Kurt Kalcher, Ivan Svancera, Karel Vytras and **Emir Turkušić**, *Amperometric Biosensor for the determination of Glucose Based on a Manganese Dioxide-Modified Carbon Paste Electrode*, European Symposium of Electroanalytical Chemistry (ESEAC 98) Cuimbra, Portugal.

Regional and domestic conferences

1. Adnan Zahirović, Emir Turkušić, Emira Kahrović. Oxidative Decomposition of Quercetin in Presence of Ruthenium(III). 2nd Congress of Chemists and Chemical Engineers of Bosnia and Herzegovina with International participation.

2. Sabina Begić-Hairlahović, Emira Kahrović and Emir Turkušić, Synthesis and characterization of novel cationic complexes Ru(III) with N-heterocycles and Schiff base derived from salicylaldehyde, Congress of Chemists and Chemical Engineers of Bosnia and Herzegovina with International Participation, Sarajevo, Bosnia and Herzegovina, 10-12 October 2014, Book of Abstracts, p.88

3. Redžić Safeta, Emira Kahrović and Emir Turkušić, Development of a New Amperometric Sensor for Dopamine Based on the Carbon Electrode Modified with Ru(III) Complex, Congress of Chemists and Chemical Engineers of Bosnia and Herzegovina with International Participation, Sarajevo, Bosnia and Herzegovina, 10-12 October 2014, Book of Abstracts, p.84

4. .Emir Turkušić, Emira Kahrović, Nevzeta Ljubijankić, Adnan Zahirović, Chemical sensors and biosensors in the control and protection of the environment and health, Second scientific and professional conference with international participation "June 5 - World Environment Day", Bihać, Bosnia and Herzegovina, 4 - 5 June 2014, Collection of abstracts, p. 36.

5. Adnan Zahirovic, Ilda Graca, Emir Turkusic, Emira Kahrovic, Synthesis and characterization of new ruthenium (III) complex with tridentate dibasic Schiff base, X Meeting of Young Chemical Engineers, Zagreb, Croatia, 20 – 21 February 2014, oral presentation, Book of Abstracts, p. 56.

6. S. Begić, T. Waryo, E.Turkušić, E. Kahrović, K.Vytras, K. Kalcher, “Iron(II) oxide Modified Screen-printed carbon Electrode Sensor”, 13th Young Investigetors Seminar On Analitical Chemistry, July 5-8th 2006, Zagreb, Croatia.

7. S. Begić, E. Turkušić, T.T. Waryo, E. Kahrović, K. Vytras and K. Kalcher, „Some metal oxides as mediator for the amperometric determination of hydrogen peroxide“ – 12 th Young investigators` Seminar onAnalytical Chemistry July 5 – July 10, 2005, Sarajevo, Bosnia and Herzegovina.

8. Emir Turkušić, The state and prospects of science in Bosnia and Herzegovina; First Congress of Agriculture, Veterinary Medicine and Forestry of the Federation of Bosnia and Herzegovina, Neum, May 2003.

Peer-reviewed university textbooks

dr. Sc. Emir Turkušić is the author of one textbook and co-author of chapters in two books:

1.Sensing in Electroanalysis (co-author on the chapter“ Metal Oxide-Modified Carbon Amperometric H2O2 - Transducers and Oxide-Biosensors“) Editors: Karel Vytras and Kurt Kalcher, ISBN: 80-7194-831-4 (2005).

2. Clinical Immunology, group of authors (co-author on the chapter "Immunosensor technologies and their application in the clinical laboratory"). Svjetlost Sarajevo, ISBN 978-9958-10-844-0 (2007).

3. Emir Turkušić, Chemical sensors and biosensors, textbook, Faculty of Science, Sarajevo, ISBN 978-.553. 9958-592-28-7, CIP NUB BiH 543084(075.8) (2012)

- Reviewer for the field of electrochemical biosensors for Springer Verlag.
- University textbook reviewer, Assoc. Prof. Dr. Emira Kahrović; Inorganic Chemistry

- Reviewer for projects funded by the Ministry of Science, Education and Sports of the Republic of Croatia - National Science Council.

- Reviewer for Croatica Chemica Acta (2008).

- Reviewer of the Study "Strategy of Scientific and Technological Development of Bosnia and Herzegovina", Academy of Sciences and Arts of Bosnia and Herzegovina, (2006).

- Reviewer for Sensor Letters, American Scientific Publishers 2013.

Memberships in committees / teams

Member of expert teams for the development of the information society:

- Šabić Z., Turkušić E., Bakaršić K., Marić P., Nosović N., Mujačić S., Mulalić A., Lemeš S., and Dautbegović S., Strategy for Development of the Information Society of Bosnia and Herzegovina: eEducation, BH Council of Ministers, Sarajevo, 2004.

- Šabić Z., Turkušić E., Bakaršić K., Marić P., Nosović N., Mujačić S., Mulalić A., Lemeš S., and Dautbegović S., Action Plan for Development of the Information Society of Bosnia and Herzegovina: eEducation, BH Council of Ministers, Sarajevo, 2004.

Member of the Expert Commission of the Federal Ministry of Environment and Tourism for the assessment of PA for:

1. SOLANA D.D. Tuzla, UP-I/05-23-222-1/09 (2010)
2. 2. Butila Wastewater Treatment Plant in Sarajevo (2010)
3. **3.** FARMAVITA d.d. Sarajevo UP-I/05-23-5-164-1/09 od 13.7. 2010.

Scientific research projects (domestic)

1. 1. Project leader "Cadastre of arsenic content in the surface waters of Sarajevo Canton", Number: 11-14-21624.1/07 dated 27.12.2007.
2. 2. Associate in the project at the Faculty of Dentistry, University of Sarajevo entitled; "In vitro evaluation of electrochemical corrosion of dental amalgams and assessment of its impact on human health", Project number: 11-14-21625.1/07.
3. 3. Associate in the project "Research of new compounds as potential anticancer agents and development of new biosensors", Federal Ministry of Education and Science, 2003-2005.
4. 4. Associate in the project “Development of new metal complexes as antitumor agents and new biosensors”, Cantonal Ministry of Education and Science, 2003-2005.
5. 5. Participant in the ANUBIH project “Global Project - Science Policy in the Federation of Bosnia and Herzegovina”, 2006

International projects

1. CEEPUS projekt Education of Modern Analytical and Bioanalytical Methods CIII-CZ-0212-08-1415 (od 2012 do danas)

2. Saradnik u projektu “Investigation of new complex compound as potential anticancers and development of new biosensors”, UNESCO, (2002-2003)

3. ECOST Bio, Europian cooperation in science and technology, (2014)

4. SCOPES, (2014)

Lectures by invitation

1. High School of Science and Technology; State and Perspectives of Science in BiH in the Light of European Integration, November 2004.

2. Bosnia Forum; December 2004, NEW TECHNOLOGIES AND THE QUESTION OF THE FUTURE OF BOSNIA AND HERZEGOVINA Sarajevo, November 23, 2004.

3. Faculty of Medicine Sarajevo, postgraduate study; SITUATION IN SCIENCE IN BIH AND CHALLENGES OF EUROPEAN INTEGRATION - Indexing, referencing, citation - clarification of terms, Sarajevo; 15.01.2005.

4. Thailand, Mahidol University in Bangkok, „Biosensors for the Determination of Bonded Glucose“ on 26th November 2007.

5. Thailand, Ubon Rajathanee University u istoimenom gradu, „Biosensors for the Determination of Bonded Glucose“ on 30th November 2007.

Awards and recognitions

1. Recognized for two innovations at the UNIS-UTL (AN SKF Associated Company) factory in 1985.

2. Sixth of April Award of the City of Sarajevo for 2005, Sarajevo Canton Government 2003-2006.

3. Winner of the Grand Medal of Honor for Contribution to the Development of Innovation in BiH "GRANDE MEDAILLE D'HONNEUR CONCOURS LEPINE" Republique Francaise, Paris, May 2004.

4. Diploma with a gold badge as a sign of recognition, support and gratitude for a special contribution to the building of peace and democracy through the reform of youth education from primary school to university according to modern European standards" President Academician Helmut Moritz Graz, 10/12/2003 Sarajevo, 2004