

PERSONAL INFORMATION



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<https://www.ktf.unist.hr/index.php/kontakt-3/kontakt-djelatnici/item/tomas-renato>
 married: wife Anita Tomaš (graduated economist); children: Petar Tomaš and Lovre Tomaš

Sex Male | Date of birth 20/06/1967 | Nationality Croatian

JOB APPLIED FOR
 POSITION
 PREFERRED JOB
 STUDIES APPLIED FOR

Physical Chemistry of Solutions (thermodynamic and transport properties of electrolytes in mixed solvents; study of ion-ion and ion-solvent interactions; calixarene chemistry; ionic liquids)

WORK EXPERIENCE

2014 – today: Associated Professor of Physical Chemistry at University of Split; Head of Department of Physical Chemistry, Faculty of Chemistry and Technology, University of Split: (2007-2009, and 2011-2013); 2002 - received a Ph. D. degree in Natural Sciences, Chemistry, University of Split. **Field of work and research experience:** solution chemistry (thermodynamics of electrochemical reactions, thermodynamics of metal-ligand complexes formation, thermodynamics of the association reaction of electrolytes, determination of limiting molar conductivities of ions, viscosity and density studies of electrolytes: study of ion-ion and ion-solvent interactions; ionic liquids); supramolecular chemistry (thermodynamics of calixarene chemistry). **Teaching experience:** lecturer in Selected Topics in Physical Chemistry of Environmental to Ph. D. students of chemistry; lecturer in Physical Chemistry to undergraduate and graduate students of chemistry, chemical technology, pharmacy, and biology and chemistry; seminar teacher to undergraduate and graduate students taking courses in Physical Chemistry; lecturer and seminar in Elements of Physical Chemistry on the professional study of chemical technology; laboratory teacher in Physical chemistry and Physical Chemistry of Electrolyte Solutions.

Replace with dates (from - to) Associate professor (2014-), assistant professor (2005-2014), senior research assistant (2002–2005), research assistant (1999-2002), junior research assistant (1994-1999).

Department of Physical Chemistry, Faculty of Chemistry and Technology, University of Split (from 1994 -)

- Teaching and research activities at University of Split.

High education and science; research projects.

EDUCATION AND TRAINING

Replace with dates (from - to) **Additional professional training:** Department of Chemistry, Biochemistry and Environmental Protection, Faculty of Sciences, University of Novi Sad, Serbia, short-term visit (2022, seven days, Erasmus+ teaching); Department of Physical Chemistry, Faculty of Chemistry, University of Lodz, Poland, short-term visit (2021, seven days, Erasmus+ teaching; 2015, two weeks, Erasmus+ Staff Training Mobility); Chair of Physical Chemistry, Department of Chemistry and Biochemistry, Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia, short-term visit (2012, Erasmus Staff Training Mobility, seven days, research focus: viscosity studies of electrolyte solutions); Division of Physical Chemistry, Department of Chemistry, Faculty of Science, University of Zagreb, Croatia, short-term visit (2008, four months, research focus: thermodynamics of calixarene chemistry).

Replace with
 European
 Qualification
 Framework (or other)
 level if relevant

- Experimental methods used: potentiometry, conductometry, viscometry, densitometry, UV/VIS-spectrometry.

PERSONAL SKILLS

Sailing, Folk Dancing

Mother tongue(s) Croatian

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B1	B1	B1	B1

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

Communication skills Good communication skills gained through my experience as lecturer.

Organisational / managerial skills ▪ Head of Department of Physical Chemistry, FCT, University of Split
Job-related skills Replace with any job-related skills not listed elsewhere. Specify in what context they were acquired.
Example:
▪ good command of quality control processes (currently responsible for quality audit)

Computer skills ▪ good command of Microsoft Office™ tools
▪ good experience of acquisition and processing of experimental data

Other skills ▪ Good command of Sigma Plot

Driving licence ▪ B

ADDITIONAL INFORMATION

Publications
Presentations
Projects
Conferences
Seminars
Memberships
References

Short review of scientific output: co-author or author of 39 scientific papers, and 38 conference contributions.

Projects:

1. Project MZOS 1-07-112 (from 1994. to 1996.): Properties of electrolytes in mixed solvents (PI: prof. dr. Ivica Mekjavić).
2. Project MZOS 011008 (from 1997. to 2002.): Properties of electrolytes in mixed solvents (PI: prof. dr. Ivica Mekjavić).
3. Project MZOS 0011008 (from 2003. to 2006.): Properties of electrolytes in mixed solvents (PI: prof. dr. Ivo Tominić).
4. Project MZOS 011-0000000-3220 (from 2008. to 2013.): Electrolytes in mixed solvents (PI: prof. dr. sc. I. Tominić).
5. EXchange on Ionic Liquids (EXIL), COST Action CM1206 (from 2016. to 2017.), member from Croatia, prof. dr. Renato Tomaš.
6. Project COST-STSM-CM1206-32790 (from 2016. to 2017.): Studies of Molecular Interactions of Some Imidazolium Chloride Ionic Liquids in Water by Viscometric and Volumetric Measurements at Different Temperatures (PI: prof. dr. Renato Tomaš).
7. Project "SUPRACAR": Development of Supramolecular Receptors for Cations and Anions (from 2015. to 2019.), HRZZ (PI: prof. dr. Vladislav Tomišić).
8. Project "MAKROSOL": Coordination Reactions of Macrocyclic Ligands in Solution (from 2019. to 2024.), HRZZ (PI: prof. dr. Vladislav Tomišić)
9. Network for Equilibria and Chemical Thermodynamics Advanced Research (NECTAR), COST Action CA18202 (from 2021. to 2024.), member from Croatia, prof. dr. sc. Renato Tomaš.

Conferences: participated in numerous international conferences.

University book: J. Radošević, V. Sokol, R. Tomaš, P. Bošković, Laboratorijske vježbe iz fizikalne kemije, Udžbenici Sveučilišta u Splitu, Split, 2016.

Mentorship for 25 BSc and MSc thesis.

Membership: Croatian Society of Chemists and Engineers; Croatian Chemical Society; Almae Matris Alumni Chemico-Technologicae Facultatis Spalatensis.

ANNEXES

1. M. Višić, R. Tomaš, I. Mekjavić, Stability constants of chlorocadmium complexes in t-butanol + water mixtures ($w_{\text{BuOH}} = 10\%$, 30% , and 50%) from electromotive force measurements, *Croatica Chemica Acta*, 72 (1999) 55-70.
2. R. Tomaš, M. Višić, I. Mekjavić, Thermodynamics of cadmium chloride in t-butanol plus water mixtures ($w_{\text{BuOH}} = 10\%$, 30% , and 50%) from electromotive force measurements, *Croatica Chemica Acta*, 73 (2000) 423-433.
3. R. Tomaš, M. Višić, I. Tominić, V. Sokol, Determination of stability constants of chlorocadmium complexes in water from electromotive force measurements, *Croatica Chemica Acta*, 74 (2001) 91-101.
4. R. Tomaš, I. Tominić, V. Sokol, M. Višić, Investigation of the complex forming reactions of Cd^{2+} and Cl^- ions in 2-butanone + water mixtures by direct potentiometry, *Croatica Chemica Acta*, 77 (2004) 519-527.
5. I. Tominić, R. Tomaš, M. Višić, V. Sokol, Conductometric study of hydrobromic acid in 2-propanol + water mixtures, *Croatica Chemica Acta*, 77 (2004) 537-543.
6. R. Tomaš, I. Tominić, M. Višić, V. Sokol, Thermodynamics of cadmium chloride in 2-butanone + water mixtures (5, 10, and 15 Mass%) from electromotive force measurements, *Journal of Solution Chemistry*, 33 (2004) 1397-1410.
7. V. Sokol, I. Tominić, R. Tomaš, M. Višić, Thermodynamics of the association reaction of Li^+ and Br^- ions in 2-butanol + water mixtures from conductivity measurements, *Croatica Chemica Acta*, 78 (2005) 43-47.
8. R. Tomaš, I. Tominić, M. Višić, V. Sokol, Complexation of Cd^{2+} and Cl^- ions in aqueous mixtures of 2-butanol, *Croatica Chemica Acta*, 78 (2005) 289-294.
9. R. Tomaš, I. Tominić, M. Višić, V. Sokol, Thermodynamic study of cadmium chloride in aqueous mixtures of 2-butanol from potential difference measurements, *Journal of Solution Chemistry*, 34 (2005) 981-992.
10. V. Sokol, R. Tomaš, M. Višić, I. Tominić, Conductometric study of potassium bromide in 2-butanol + water Mixtures, *Journal of Solution Chemistry*, 35 (2006) 1687-1698.
11. V. Sokol, R. Tomaš, I. Tominić, Thermodynamics of the association reaction of RbBr in binary mixtures of 2-butanol and water from 288.15 to 308.15 K, *Acta Chimica Slovenica*, 55 (2008) 308-314.
12. V. Sokol, R. Tomaš, I. Tominić, Conductometric Study of Cesium Bromide in 2-Butanol + Water Mixtures, *Polish Journal of Chemistry*, 82 (2008) 1585-1596.
13. V. Sokol, R. Tomaš, I. Tominić, Conductometric study of ammonium bromide in 2-butanol + water mixtures, *Acta Chimica Slovenica*, 56 (2009) 773-779.
14. V. Sokol, R. Tomaš, K. Šarić, Thermodynamic properties of RbBr and CsBr in 2-butanol (5 mass.%) + water mixture, International Scientific and Professional Conference 13th Ružička Days "Today Science - Tomorrow Industry", Vukovar, 16th and 17th September 2010, *Proceedings*, Osijek, (2011) 84-94.
15. R. Tomaš, V. Sokol, P. Bošković, Thermodynamic properties of CdCl_2 in tert. butanol (5 mass.%) + water mixture, International Scientific and Professional Conference 13th Ružička Days "Today Science - Tomorrow Industry", Vukovar, 16th and 17th September 2010, *Proceedings*, Osijek, (2011) 95-106.
16. N. Galić, N. Burić, R. Tomaš, L. Frkanec, V. Tomišić, Synthesis and cation binding properties of fluorescent calix[4]arene derivatives bearing tryptophan units at the lower rim, *Supramolecular Chemistry*, 23 (2011) 389-397.
17. V. Sokol, R. Tomaš, P. Bošković, Ion-association reaction of Rb^+ and Br^- in 2-methylpropan-2-ol + water mixtures, *Acta Chimica Slovenica*, 59 (2012) 920-926.
18. A. Bald, Z. Kinart, R. Tomaš, Volumetric studies of aqueous solutions of monosodium salts of some aliphatic dicarboxylic acids at 298.15 K. A new method of data analysis, *Journal of Molecular Liquids*, 178 (2013) 94-98.
19. A. Bald, Z. Kinart, A. Wypych-Stasiewicz, R. Tomaš, Conductance studies of NaCl , KCl , NaBr , KBr , Bu_4NBr , and NaBPh_4 in water + 2-methoxyethanol at 298.15 K, *Journal of Molecular Liquids*, 182 (2013) 14-24.
20. R. Tomaš, V. Sokol, P. Bošković, A. Turudić, Transference numbers of sodium chloride in formamide + water mixtures at 298.15 K from potential difference measurements, *International Journal of Electrochemical Science*, 8 (2013) 7669-7679.
21. V. Sokol, R. Tomaš, P. Bošković, A. Škobalj, Conductivity of ammonium bromide in 2-butanol (5 mass %) + water mixture, International Scientific and Professional Conference 14th Ružička Days "Today Science - Tomorrow Industry", Vukovar, 2012, *Proceedings*, Zagreb, Osijek, (2013) 76-85.
22. P. Bošković, V. Sokol, R. Tomaš, A. Prkić, Conductometric study of potassium chloride in ethanol-water mixtures, *International Journal of Electrochemical Science*, 8 (2013) 10961-10975.
23. R. Tomaš, V. Sokol, P. Bošković, Ž. Peko, Transference number and conductance studies of sodium chloride in aqueous mixtures of ethanol at 298.15 K, *Journal of International Scientific Publications: Materials, Methods and Technologies*, 8 (2014) 518-525.
24. M. Tranfić Bakić, D. Jadreško, T. Hrenar, G. Horvat, J. Požar, N. Galić, V. Sokol, R. Tomaš, S. Alihodžić, M. Žinić, L. Frkanec, V. Tomišić, Fluorescent phenanthridine-based calix(4)arene derivatives: synthesis and thermodynamic and computational studies of their complexation with alkali-metal cations, *Royal Society of Chemistry Advances*, 5 (2015) 23900-23914.
25. R. Tomaš, A. Vrdoljak, Thermodynamic study of CdCl_2 in 2-propanol (5 mass %) + water mixture using potentiometry, International Scientific and Professional Conference 15th Ružička Days "Today Science - Tomorrow Industry", Vukovar, 2014, *Proceedings*, Osijek, Zagreb, (2015) 41-49.
26. R. Tomaš, T. Jovanović, M. Bešter-Rogač, Viscosity B-coefficient for sodium chloride in aqueous mixtures of 1,4-dioxane at different temperatures, *Acta Chimica Slovenica*, 62 (2015) 531-537.
27. A. Bald, Z. Kinart, R. Tomaš, Viscosity coefficients of KCl , NaCl , NaI , KNO_3 , LiNO_3 , NaBPh_4 and Bu_4NI in water-dimethylsulfoxide binary mixtures with a low organic solvent content, *Croatica Chemica Acta*, 89 (2016) 345-353.
28. N. Cindro, J. Požar, D. Barišić, N. Bregović, K. Pičuljan, R. Tomaš, L. Frkanec, V. Tomišić, Neutral glycoconjugated amide-based calix[4]arenes: complexation of alkali metal cations in water, *Organic and Biomolecular Chemistry*, 16 (2018) 904-912.

29. R. Tomaš, A. Tot, J. Kuhar, M. Bešter-Rogač, Interactions in aqueous solutions of imidazolium chloride ionic liquids [C_nmim][Cl] (n = 0, 1, 2, 4, 6, 8) from volumetric properties, viscosity B-coefficients and molecular dynamics simulations, *Journal of Molecular Liquids*, 254 (2018) 267-271.
30. Z. Kinar, R. Tomaš, Conductometric study of potassium chloride in ethylene glycol + water mixtures at different temperatures, *International Journal of Electrochemical Science*, 15 (2020) 5560-5570.
31. Z. Kinar, R. Tomaš, Conductivity properties of selected aliphatic monocarboxylic acid anions in water at 298.15 K, *International Journal of Electrochemical Science*, 15 (2020) 10007-10027.
32. R. Tomaš, Imidazolium-based ionic liquids: some research methods, applications and physico-chemical properties, *Croatica Chemica Acta*, 94 (2021) 83-94.
33. R. Tomaš, Z. Kinar, A. Tot, S. Papović, T. T. Borović, M. Vraneš, Volumetric properties, conductivity and computation analysis of selected imidazolium chloride ionic liquids in ethylene glycol, *Journal of Molecular Liquids*, 345 (2022) 118178.
34. Z. Kinar, R. Tomaš, Studies of the Formation of Inclusion Complexes Derivatives of Cinnamon Acid with α -Cyclodextrin in a Wide Range of Temperatures Using Conductometric Methods, *Molecules*, 27 (2022) 4420.
35. M. Vraneš, S. Rackov, S. Papović, R. Tomaš, B. Pilić, Effect of alkyl chain elongation on thermophysical properties of 1-alkyl-3-vinylimidazolium bromide based ionic liquids and salts, *Journal of Chemical & Engineering Data*, 67 (2022) 3329-3339.
36. M. Vraneš, T. T. Borović, P. Drid, T. Trivić, R. Tomaš, N. Janković, Influence of Sodium Salicylate on Self-Aggregation and Caffeine Solubility in Water - A New Hypothesis from Experimental and Computational Data, *Pharmaceutics*, 14 (2022) 2304.
37. R. Tomaš, M. Vraneš, A. Krešo, Z. Kinar, T. T. Borović, S. Papović, Volumetric properties of the diluted solutions of imidazolium-based ionic liquids in butan-2-ol or butan-2-one, *Journal of solution chemistry*, 52 (2023) 134-146.
38. M. Vraneš, Z. Kinar, T. T. Borović, S. Papović, R. Tomaš, The physicochemical properties of selected imidazolium chloride ionic liquids in tetraethylene glycol: Experimental and computational approach, *Journal of molecular liquids*, 372 (2023) 120763.
39. R. Tomaš, I. Pehar, Z. Kinar, M. Vraneš, S. Papović, T. T. Borović, Volumetric properties of solutions of 1-methylimidazolium acetate ionic liquid in water, *N,N*-dimethylformamide, *N,N*-dimethylacetamide, and dimethyl sulfoxide, International conference 19th Ružička Days "Today Science - Tomorrow Industry", Vukovar, 2022, *Proceedings*, Osijek, Zagreb, (2023) 76-97.
40. M. Modrušan, N. Cindro, A. Usenik, K. Leko, L. Glazer, R. Tomaš, G. Horvat, J. Požar, V. Tomišić, Complexation of alkali and alkaline earth metal cations by fluorescent glycoconjugated calix[4]arene derivative: Thermodynamic and computational studies, *Croatica Chemica Acta*, 97(4) (2024), 15 pages.