

Priv.-Doz. Dr. Catalin P. Gainaru



Personal information

Citizenships	German, Romanian
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Education

1995 -1999	Faculty of Physics, specialization Medical Physics, University “Al. I. Cuza” Iasi, Romania (valedictorian)
1999	Bachelor in Medical Physics, Faculty of Physics, University “Al. I. Cuza”, Iasi, Romania (maximum score)
1999 - 2000	Postgraduate studies on “Applied Physics”, Faculty of Physics, University “Al. I. Cuza” (maximum score)
2001 - 2007	Doctoral studies at Experimentalphysik II, University of Bayreuth, Germany
2008	PhD with the dissertation: “Dielectric properties of molecular glass formers: from the liquid state to the tunneling regime”
2017	Habilitation with the dissertation “The Debye process of monohydroxy alcohols and related H-bonded liquids”

Professional activities

2001 - 2007	Doctoral studies in the group of Prof. E. Rössler at Bayreuth University, Germany
2007 - 2014	Postdoctoral studies in the group of Prof. R. Böhmer at Technical University of Dortmund, Germany
2011	Research guest in the group of Prof. J. Dyre at Roskilde University, Denmark
2011	Neutron scattering research visit at the Institute Laue-Langevin, Grenoble, France
2012	Research guest of Prof. R. Richert at Arizona State University in Tempe, USA
2012, 2013	Research visits in the group of Prof. M. Wilhelm at Karlsruhe Institute for Technology in Karlsruhe, Germany
2014	“Akademischer Rat auf Zeit” at TU Dortmund University
2015-2016	Research Scientist I in the group of Prof. A. Sokolov at University of Tennessee and Oak Ridge National Lab, USA
from 2017	“Privatdozent” of Faculty of Physics, TU Dortmund University

Awards, scholarships, extra-activities

2000	ERASMUS scholarship at „Ecole Nationale Supérieure d'Electrotechnique, d'Electronique, d'Informatique, d'Hydraulique et de Télécommunication” Toulouse, France
2010	“Peter Debye Prize for Young Investigators for Excellence in Dielectric Research” granted by the International Dielectric Society
from 2014	Board member of International Dielectric Society
from 2016	Secretary of International Dielectric Society
2017	Research proposal granted by the German Research Foundation (DFG) on “Charge transport, thermodynamics,

and hydrodynamics in side-chain and main-chain polymerized ionic liquids”

Reviewer for Macromolecules, Proceedings of the National Academy of Sciences, Physical Review Letters, Chemistry Review Letters, European Physical Journal, Physical Review E, Mechanics and Materials, Physical Review B, Journal of Chemical Physics, Journal of Physical Chemistry Letters, Journal of Physical Chemistry B, Journal of Non-Crystalline Solids, Physical Chemistry Chemical Physics

- Top reviewer for Journal of Chemical Physics in 2017

Research topics

- Charge transport in ionic liquids and polymer electrolytes
- Viscoelastic and dielectric properties of polymers
- Relaxation processes in soft matter
- Nonlinear effects in disordered materials
- Amorphous materials at cryogenic temperatures
- Dynamics in water, hydrated proteins, amorphous and crystalline ices
- Structure and dynamics of hydrogen-bonded networks

Employed experimental techniques

- Linear and nonlinear dielectric spectroscopy
- Linear and nonlinear rheology
- Solvation dynamics
- Nuclear magnetic resonance
- X-ray diffraction
- Quasielastic neutron scattering
- Infrared spectroscopy
- Depolarized light scattering and photon correlation spectroscopy
- Fast scanning calorimetry

Publications list

1. Adichtchev S., Blochowicz T., **Gainaru C.**, Novikov V.N., Rössler E.A., Tschirwitz C. “Evolution of the dynamic susceptibility of simple glass formers in the strongly supercooled regime” *J. Phys.: Condens. Matter* 15, 835 (2003)
2. Rivera A., Santamaria J., Leon C., Blochowicz T., **Gainaru C.**, Rössler E.A. “Temperature dependence of the ionic conductivity in $\text{Li}_{3x}\text{La}_{2/3-x}\text{TiO}_3$: Arrhenius versus non-Arrhenius” *Appl. Phys. Lett.* 82, 2425 (2003)
3. Qi F., El Goresy T., Bohmer R., Doss A., Diezemann G., Hinze, G., Sillescu H., Blochowicz T., **Gainaru C.**, Rössler E.A., Zimmermann H. “Nuclear magnetic resonance and dielectric spectroscopy of a simple supercooled liquid: 2-methyl tetrahydrofuran” *J. Chem. Phys.* 118, 7431 (2003)
4. Rivera A., Blochowicz T., **Gainaru C.**, Rössler E.A. “Spectral response from modulus time domain data of disordered materials” *J. Appl. Phys.* 96, 5607 (2004)
5. Lusceac S. A., **Gainaru C.**, Vogel M., Koplín C., Medick P., Rössler E.A. “Secondary relaxation processes in polybutadiene studied by ^2H nuclear magnetic resonance and high-precision dielectric spectroscopy” *Macromolecules* 38, 5625 (2005)
6. **Gainaru C.**, Rivera A., Putselyk S., Eska G., Rössler E.A. “Low temperature dielectric relaxation of molecular glasses: crossover from the nearly constant loss to the tunneling regime” *Phys. Rev. B* 72, 174203 (2005)
7. Blochowicz T., **Gainaru C.**, Medick P., Tschirwitz C., Rössler E.A. “The dynamic susceptibility in glass forming molecular liquids: The search for universal relaxation patterns II” *J. Chem. Phys.* 124, 13 (2006)
8. **Gainaru C.**, Blochowicz T., Brodin A., Schick H., Medick P., Tschirwitz C., Rössler E.A. “Supercooled liquids and plastically crystalline phases: Indications for a similar manifestation of a crossover in the evolution of the dielectric spectra” *J. Non-Cryst. Solids.* 352, 42 (2006)
9. Kariyo S., **Gainaru C.**, Schick H., Brodin A., Novikov V.N., Rössler E.A. “From a Simple Liquid to a Polymer Melt: NMR Relaxometry Study of Polybutadiene” *Phys. Rev. Lett.* 97, 20 (2006)
10. Brodin A., **Gainaru C.**, Porokhonsky V., Rössler E.A. “Evolution of dynamic susceptibility in molecular glass-formers – a critical assessment” *J. Phys.: Cond. Matter* 19, 205104 (2007)
11. Kariyo S., Herrmann A., **Gainaru C.**, Schick H., Brodin A., Novikov V. N., Rössler E. A. “Erratum: From a Simple Liquid to a Polymer Melt: NMR Relaxometry Study of Polybutadiene [Phys. Rev. Lett. 97, 207803 (2006)]” *Phys. Rev. Lett.* 100, 109901 (2008)
12. **Gainaru C.**, Lips O., Troshagina A., Kahlau R., Brodin A., Fujara F., Rössler E.A. “On the nature of the high-frequency relaxation in a molecular glass former: A joint study of glycerol by field cycling NMR, dielectric spectroscopy and light scattering” *J. Chem. Phys.* 128, 174505 (2008)

13. Kariyo S., Brodin A., **Gainaru C.**, Herrmann A., Schick H., Novikov V.N., Rössler E.A. "From simple liquid to polymer melt: Glassy and polymer dynamics studied by fast field cycling NMR relaxometry - Part I: Low and high molecular weight limit " *Macromolecules* 41, 5313 (2008)
14. Kariyo S., Brodin A., **Gainaru C.**, Herrmann A., Hitermeyer J., Schick H., Novikov V.N., Rössler E.A. "From simple liquid to polymer melt: Glassy and polymer dynamics studied by fast field cycling NMR relaxometry - Part II: Rouse regime" *Macromolecules* 41, 5322 (2008)
15. Schildmann S., Nowaczyk A., Geil B., **Gainaru C.**, Böhmer R. „Water dynamics on the hydrate lattice of a tetra-butyl ammonium bromide semi-clathrate" *J. Chem. Phys.* 130, 104505 (2009)
16. **Gainaru C.**, Fillmer A., Böhmer R. "Dielectric response of deeply supercooled hydration water in the connective tissue proteins collagen and elastin" *J. Phys. Chem. B* 113, 12628 (2009)
17. **Gainaru C.**, Böhmer R. "The oligomer-to-polymer transition of poly(propylene glycol) revealed by dielectric normal modes" *Macromolecules* 42, 7616 (2009)
18. **Gainaru C.**, Kahlau R., Rössler E.A., Böhmer R. "Evolution of excess wing and β -process in simple glass formers" *J. Chem. Phys.* 131, 184510 (2009)
19. **Gainaru C.**, Hiller W., Böhmer R. "A Dielectric Study of Oligo- and Poly(propylene glycol)" *Macromolecules* 43, 1907 (2010)
20. **Gainaru C.**, Böhmer R. "Coupling of the electrical conductivity to the structural relaxation, absence of physical aging on the time scale of the Debye process, and number of correlated molecules in the supercooled monohydroxy alcohol 2-ethylhexanol" *J. Non-Cryst. Solids* 356, 542 (2010)
21. Fillmer A., **Gainaru C.**, Böhmer R. "Broadened dielectric loss spectra and reduced dispersion strength of viscous glycerol in a connective tissue protein" *J. Non-Cryst. Solids* 356, 743 (2010)
22. **Gainaru C.**, Böhmer R., Williams G. "Ion sweeping in conducting dielectric materials" *Eur. Phys. J. B* 75, 209 (2010)
23. Reiser A, Kasper G., **Gainaru C.**, Böhmer R. "Communications: High-pressure dielectric scaling study of a monohydroxy alcohol" *J. Chem. Phys.* 132, 181101 (2010)
24. Nelson H., Nowaczyk A., **Gainaru C.**, Schildmann S., Geil B., Böhmer R. "Deuteron nuclear magnetic resonance and dielectric study of host and guest dynamics in KOH doped tetrahydrofuran clathrate hydrate" *Phys. Rev. B* 81, 224206 (2010)
25. **Gainaru C.**, Böhmer R. "Comment on Hidden Slow Dynamics in Water" *Phys. Rev. Lett.* 104, 249803 (2010)
26. **Gainaru C.**, Böhmer R., Kahlau R., Rössler E.A. "Energy landscape in molecular glasses probed by high-resolution dielectric experiments" *Phys. Rev. B* 82, 104205 (2010)

27. **Gainaru C.**, Meier R., Schildmann S., Lederle C., Hiller W., Rössler E.A., Böhmer R. „Nuclear magnetic resonance measurements reveal the origin of the Debye process in monohydroxy alcohols” *Phys. Rev. Lett.* 105, 258303 (2010)
28. Lusceac S.A., Rosenstihl M., Vogel M., **Gainaru C.**, Fillmer A., Böhmer R. “NMR and dielectric studies of hydrated collagen and elastin: Evidence for a delocalized secondary relaxation” *J. Non. Cryst.-Solids* 357, 655 (2011)
29. Lederle C., Hiller W., **Gainaru C.**, Böhmer R. “Diluting the hydrogen bonds in viscous solutions of n-butanol with n-bromobutane: II. A comparison of rotational and translational motions” *J. Chem. Phys.* 134, 064512 (2011)
30. **Gainaru C.**, Kastner S., Mayr F., Lunkenheimer P., Schildmann S., Weber H.J., Hiller W., Loidl A., Böhmer R. “Hydrogen-bond equilibria and life times in a monohydroxy alcohol” *Phys. Rev. Lett.* 107, 118304 (2011)
31. Lusceac S.A., **Gainaru C.**, Ratzke D.A., Graf M.F., Vogel M. “Secondary water relaxation in a water/dimethyl sulfoxide mixture revealed by deuteron nuclear magnetic resonance and dielectric spectroscopy” *J. Phys. Chem. B* 115, 11588 (2011)
32. **Gainaru C.**, Schildmann S., Böhmer R. “Surface and confinement effects on the dielectric relaxation of a monohydroxy alcohol” *J. Chem. Phys.* 135, 174510 (2011)
33. Schildmann S., Reiser A., Gainaru R., **Gainaru C.**, Böhmer R. “Nuclear magnetic resonance and dielectric noise study of spectral densities and correlation functions in the glass former 2-ethyl-1-hexanol” *J. Chem. Phys.* 135, 174511 (2011)
34. Adishchev S., Bock D., **Gainaru C.**, Kahlau R., Micko B., Petzold N., Pötzschner B., Rössler E.A. “Reorientational dynamics of organophosphate glass formers – a joint study by ³¹P NMR, dielectric spectroscopy and light scattering” *Z. Phys. Chem.* 226, 1149 (2012)
35. **Gainaru C.**, Hecksher T., Olsen N.B., Böhmer R., Dyre J.C. „Shear and dielectric responses of propylene carbonate, tripropylene glycol, and a mixture of two secondary amides” *J. Chem. Phys.* 137, 064508 (2012)
36. Preuß M., **Gainaru C.**, Hecksher T., Bauer S., Dyre J. C., Richert R., Böhmer R. „Experimental studies of Debye-like process and structural relaxation in mixtures of 2-ethyl-1-hexanol and 2-ethyl-1-hexyl bromide” *J. Chem. Phys.* 137, 144502 (2012)
37. Nelson H., Schildmann S., Nowaczyk A., **Gainaru C.**, Geil B., Böhmer R. „Small-angle water reorientations in KOH doped hexagonal ice and clathrate hydrates“ *Phys. Chem. Chem. Phys.* 13, 6355 (2013)
38. Bauer S., Burlafinger K., **Gainaru C.**, Lunkenheimer P., Hiller W., Loidl A., Böhmer R. „Debye relaxation and 250 K anomaly in glass forming monohydroxy alcohols“ *J. Chem. Phys.* 138, 094505 (2013)
39. Pawlus S., Wikarek M., **Gainaru C.**, Paluch M., Böhmer R. „How do high pressures change the Debye process of 4-methyl-3-heptanol? “ *J. Chem. Phys.* 139, 064501 (2013)
40. Bauer S., Wittkamp H., Schildmann S., Frey M., Hiller W., Hecksher T., Olsen N.B., **Gainaru C.**, Böhmer R. “Broadband dynamics in neat 4-methyl-3-heptanol and in mixtures with 2-ethyl-1-hexanol” *J. Chem. Phys.* 139, 134503 (2013)

41. Didzoleit H., Storek M., **Gainaru C.**, Geil B., Böhmer R. “Dynamics of Glass Forming Ammonia Hydrates” *J. Phys. Chem. B* 117, 12157 (2013)
42. Frey M., Didzoleit H., **Gainaru C.**, Böhmer R. “Dynamics in Glass Forming Sulfuric and Nitric Acid Hydrates” *J. Phys. Chem. B* 117, 12164 (2013)
43. Winkel K.A, **Gainaru C.**, Handle P., Seidl M., Loerting T., Nelson H., Böhmer R. „Water’s second glass transition“ *Proc. Natl. Acad. Sci.* 110, 11720 (2013)
44. **Gainaru C.**, Figuli R., Hecksher T., Jakobsen B., Dyre J. C., Wilhelm M., Böhmer R. ”Shear-Modulus Investigations of Monohydroxy Alcohols: Evidence for a Short-Chain-Polymer Rheological Response” *Phys. Rev. Lett.* 112, 098301 (2014)
45. Sillrén P., Matic A., Karlsson M., Koza M., Maccarini M., Fouquet P., Götz M., Bauer T., Gulich R., Lunkenheimer P., Loidl A., Mattson J., **Gainaru C.**, Vynokur E., Schildmann S., Bauer S., Böhmer R., “Liquid 1-propanol studied by neutron scattering, near-infrared, and dielectric spectroscopy” *J. Chem. Phys.* 140, 124501 (2014)
46. **Gainaru C.**, Wikarek M., Pawlus S., Paluch M., Figuli R., Wilhelm M., Hecksher T., Jakobsen B., Dyre J. C., Böhmer R. “Oscillatory shear and high-pressure dielectric study of 5-methyl-3-heptanol” *Colloid. Polym. Sci.* 292, 1913 (2014)
47. Bierwirth S.P., Büning T., **Gainaru C.**, Sternemann C., Tolan M., Böhmer R. “Tenfold susceptibility amplification by local association rearrangement in mixed hydrogen-bonded liquids” *Phys. Rev. E* 90, 052807 (2014)
48. Bierwirth S. P, Büning T., **Gainaru C.**, Sternemann C., Tolan M., Böhmer R. "Supramolecular x-ray signature of susceptibility amplification in hydrogen-bonded liquids” *Phys. Rev. E* 90, 052807 (2014)
49. **Gainaru C.**, Agapov A.L., Fuentes-Landete V., Amann-Winkel K., Nelson H., Köster K., Kolesnikov A.I., Novikov V.N., Richert R., Böhmer R., Loerting T., Sokolov A.P. “Anomalously large isotope effect in the glass transition of water” *Proc. Natl. Acad. Sci.* 111, 17402 (2014)
50. Böhmer R., **Gainaru C.**, Richert R. “Structure and dynamics of monohydroxy alcohols – milestones towards their microscopic understanding, 100 years after Debye” *Phys. Rep.* 545, 125 (2014)
51. Loerting T., Fuentes-Landete V., Handle P. H., Seidl M., Amann-Winkel K., **Gainaru C.**, Böhmer R. „The glass transition in high-density amorphous ice” *J. Non-Cryst. Solids* 407, 423 (2015)
52. Bauer S., Moch K., Münzner P., Schildmann S., **Gainaru C.**, Böhmer R. “Mixed Debye-type liquids studied by dielectric, shear mechanical, nuclear magnetic resonance, and near-infrared spectroscopy” *J. Non-Cryst. Solids* 407, 384 (2015)
53. Bauer S., Storek M., **Gainaru C.**, Zimmermann H., Böhmer R. “Molecular dynamics in supercooled and glassy ibuprofen: Deuteron magnetic resonance and high-resolution rheology studies” *J. Phys. Chem. B* 119, 5087 (2015)

54. Köster K.W., Fuentes Landete V., Raidt A., **Gainaru C.**, Loerting T., Böhmer R. „Dynamics enhanced by HCl doping triggers full Pauling entropy release at the ice XII-XIV transition” *Nature Commun.* 6, 7349 (2015)
55. Bauer S., Stern J., Böhm F., **Gainaru C.**, Havenith M., Loerting T., Böhmer R. “Vibrational study of anharmonicity, supramolecular structure, and hydrogen bonding in two octanol isomers” *Vibr. Spectr.* 79, 59 (2015)
56. Stern J., Seidl M., **Gainaru C.**, Fuentes-Landete V., Amann-Winkel K., Handle P.H., Köster K.W., Nelson H., Bohmer R., Loerting T. “Experimental evidence for two distinct deeply supercooled liquid states of water - Response to "Comment on Water's second glass transition", by GP Johari, *Thermochim. Acta* (2015)” *Thermochim. Acta* 617, 200 (2015)
57. Hofmann M., **Gainaru C.**, Cetinkaya B., Valiullin R., Fatkullin N., Rössler E.A. “Field-cycling relaxometry as a molecular rheology technique: Common analysis of NMR, shear modulus and dielectric loss data of polymers vs dendrimers” *Macromolecules* 48, 7521 (2015)
58. **Gainaru C.**, Bauer S., Vynokur E., Wittkamp H., Hiller W., Richert R., Bohmer R. “Dynamics in supercooled secondary amide mixtures: Dielectric and hydrogen bond specific spectroscopies” *J. Phys. Chem. B* 119, 15769 (2015)
59. Amann-Winkel K., Böhmer R., Fujara F., **Gainaru C.**, Geil B., Loerting T. “Colloquium: Water's controversial glass transitions” *Rev. Mod. Phys.* 88, 011002 (2016)
60. Xing K., Chatterjee S., Saito T., **Gainaru C.**, Sokolov A.P. “Impact of hydrogen bonding on dynamics of hydroxyl-terminated polydimethylsiloxane” *Macromolecules* 49, 3138 (2016)
61. Hansen J.S., Kisliuk A., Sokolov A.P., **Gainaru C.** “Identification of structural relaxation in the dielectric response of water” *Phys. Rev. Lett.* 116, 237601 (2016)
62. Heres M., Wang Y., Griffin P. J., **Gainaru C.**, Sokolov A. P. “Proton conductivity in phosphoric acid: The role of quantum Effects” *Phys. Rev. Lett.* 117, 156001 (2016)
63. **Gainaru C.**, Stacy E.W., Bocharova V., Gobet M., Holt A.P., Saito T., Greenbaum S., Sokolov A.P. “Mechanism of conductivity relaxation in liquid and polymeric electrolytes: Direct link between conductivity and diffusivity” *J. Phys. Chem. B* 120, 11074 (2016)
64. Köster K., Raidt A., Fuentes Landete V., **Gainaru C.**, Loerting T., Böhmer R. „Doping-enhanced dipolar dynamics in ice V as a precursor of hydrogen ordering in ice XIII” *Phys. Rev. B* 94, 184306 (2016)
65. Kumar R., Mahalik J., Bocharova V., Stacy E., **Gainaru C.**, Saito T., Gobet M., Greenbaum S., Sumpter B., Sokolov A. “A Rayleighian approach for modeling kinetics of ionic transport in polymeric media” *J. Chem. Phys.* 146, 064902 (2017)
66. Bierwirth S.P., Münzner P., Knapp T., **Gainaru C.**, Böhmer R. “Communication: Nonadditive dielectric susceptibility spectra of associating liquids” *J. Chem. Phys.* 146, 101101 (2017)
67. Lemke S., Handle P. H., Plaga L.J., Stern J.N., Seidl M., Fuentes-Landete V., Amann-Winkel K., Köster K.W, **Gainaru C.**, Loerting T., Böhmer R. “Relaxation dynamics and

transformation kinetics of deeply supercooled water: Temperature, pressure, doping, and proton/deuteron isotope effects” J. Chem. Phys. 147, 034506 (2017)

68. **Gainaru C.**, Hecksher T., Fan F., Xing K. Cetinkaya B., Olsen N.B, Dyre J.C, Sokolov A.P., Böhmer R. “Simple-liquid dynamics emerging in the mechanical shear spectra of poly(propylene glycol)” Colloid. Polym. Sci. 295, 2433 (2017)

69. Büning T., Lueg J., Bolle J., Sternemann C., **Gainaru C.**, Tolan M, Böhmer R. „Connecting structurally and dynamically detected signatures of supramolecular Debye liquids” J. Chem. Phys. 147, 234501 (2017)

70. Bierwirth S. P., Böhmer R., **Gainaru C.** „Generic primary mechanical response of viscous liquids“ Phys. Rev. Lett. 119, 248001 (2017)

71. Jensen M. H., **Gainaru C.**, Alba-Simionesco C., Hecksher T., Niss K. “Slow rheological mode in glycerol and glycerol-water mixtures” Phys. Chem. Chem. Phys. 20, 1716 (2018)

72. Vural D., **Gainaru C.**, O'Neill H., Pu Y., Smith M.D., Parks J.M., Venkatesh P.S., Mamontov E., Davison B.H., Sokolov A.P., Ragauskas A.J., Smith J.C., Petridis L. “Impact of hydration and temperature history on the structure and dynamics of lignin” Green Chem. 20, 1602 (2018)

73. **Gainaru C.**, Vynokur E., Köster K.W., Fuentes-Landete V., Spettel N., Zollner J., Loerting T., Böhmer R. „Dynamic signatures of the transition from stacking disordered to hexagonal ice: Dielectric and nuclear magnetic resonance studies“ J. Chem. Phys. 148, 134502 (2018)

74. Wieland F., Sokolov A.P., Böhmer R., **Gainaru C.** “Transient nonlinear response of dynamically decoupled ionic conductors” Phys. Rev. Lett. 121, 064503 (2018)

75. Bierwirth S.P., **Gainaru C.**, Böhmer R. “Coexistence of two structural relaxation processes in monohydroxy alcohol– alkyl halogen mixtures” J. Chem. Phys. 149, 044509 (2018)

76. Bierwirth S.P., **Gainaru C.**, Böhmer R. “Communication: Correlation of slowest shear rate and viscosity enhancement in supramolecular small-molecule liquids” J. Chem. Phys. submitted 148, 221102 (2018)

77. Bierwirth S.P., Bolle J., Bauer S., Sternemann C., **Gainaru C.**, Tolan M., Böhmer R. “Scaling of suprastructure and dynamics in pure and mixed Debye liquids“ in Loidl. A, Kremer F. *The scaling of relaxation processes* (Springer Nature, 2018)

78. Stacy E., **Gainaru C.**, Gobet M., Wojnarowska Z., Bocharova V., Greenbaum S., Sokolov A. “Fundamental limitations of ionic conductivity in polymerized ionic liquids” accepted in *Macromolecules* (2018)

Teaching

- Lecture „Polymerphysik“ in 2013, 2014, 2016, and 2018 at Faculty of Physics, Technical University of Dortmund
- Various lab courses and exercises for students of physics, chemistry, and engineering departments at University of Bayreuth and TU Dortmund University
- Specialized trainings on broadband dielectric spectroscopy and rheology at Faculty of Physics, TU Dortmund University
- Coordinator of bachelor and master theses at TU Dortmund University and of PhD at University of Tennessee
- PhD supervisor at Experimentelle Festkörperphysik EPIII, TU Dortmund University

Invited talks

“Generic features of secondary relaxations” at the 10th Conference of the International Dielectric Society “Broadband Dielectric Spectroscopy and its Application” 2018, Brussels, Belgium

"Universal flow pattern in disordered materials" at “Viscous liquids and the glass transition. XV. International workshop” 2018, Holbæk, Denmark

“Dielectric relaxation processes in glassy and liquid water” at “Dynamical properties of solids” 2017, Cracow, Poland

“Influence of polymerization on charge dynamics of ionic melts” at “8th International Discussion Meeting on Relaxation in Complex Systems” 2017, Wisla, Poland

“Dielectric relaxation processes in glassy and liquid water” at “Dynamics of glass-forming liquids: will theory and experiment ever meet?” 2017, Copenhagen, Denmark

“La Ola Mexicana in a Drop of Alcohol; Morphology and Dynamics of Hydrogen-bonded Liquids” at Department of Chemical and Biomolecular Engineering Graduate Seminar 2016, Knoxville, USA

“Kinetics of phase transitions probed via dielectric spectroscopy” at “Viscous liquids and the glass transition. XIV. International workshop” 2016, Holbæk, Denmark

“Ionic relaxation process connecting both local and macroscopic charge dynamics in conducting materials” at the 8th Conference of the International Dielectric Society “Broadband Dielectric Spectroscopy and its Application” 2016, Pisa, Italy

„Dielectric investigations of glassy water at ambient pressure” at “Condensed Matter in Paris” 2014, Paris, France.

“Rheological signature of supramolecular structures in hydrogen-bonded liquids” at “9th Annual European Rheology Conference” 2014, Karlsruhe, Germany

“Transient chain dynamics in hydrogen bonded systems” at “7th International Discussion Meeting on Relaxation in Complex Systems” 2013, Barcelona, Spain

“Small-molecule liquids displaying polymer behavior” at “Viscous liquids and the glass transition. XI. International workshop” 2013, Holbæk, Denmark

“Topology and dynamics of transient supramolecular structures in hydrogen bonded liquids” at „Principles of H-bonding in supramolecular and soft materials; solvation, self-assembly and transport phenomena” 2012, Eindhoven, Holland

“The Debye process in monoalcohols: a century-old puzzle and means to its resolution” at the 7th Conference of the International Dielectric Society “Broadband Dielectric Spectroscopy and its Application” 2012, Leipzig, Germany

“Broadband rheological and dielectric responses of viscous liquids” at “Viscous liquids and the glass transition. X. International workshop” 2012, Holbæk, Denmark

“Debye relaxation in mono-alcohols: a century-old conundrum” on “Viscous liquids and the glass transition. IX. International workshop” 2011, Holbæk, Denmark

“Destabilizing hydrogen bonding in monohydroxy alcohols” at “Viscous liquids and the glass transition. VIII. International workshop” 2010, Holbæk, Denmark

“A simple description of the full relaxation range of molecular glass formers” at “6th International Discussion Meeting on Relaxation in Complex Systems” 2009, Rome, Italy

“Dielectric study of the oligomer-to-polymer transition in a type A polymer” at “Viscous liquids and the glass transition. VII. International workshop” 2009, Holbæk, Denmark

“Dynamics Slower than the Structural Relaxation in Viscous Liquids” at “Fragility of Viscous Liquids: Cause(s) and Consequences” 2008, Copenhagen, Denmark

10/24/2018