



# Curriculum Vitae

## HRZZ Form

### PERSONAL INFORMATION

Name and surname **Silvia Tomić**  
 Academic title Dr.  
 Year and institution of PhD obtained 1986.; Laboratoire de Physique des Solides, Université Paris-Sud  
 Address Medveščak 21, HR-10000 Zagreb  
 Phone +385 1 46 98 820  
 Mobile + 385 91 5590768  
 E-mail stomic@ifs.hr  
 Personal web page <http://sceinlom.ifs.hr/>  
 Citizenship Croatian  
 Date and place of birth 22 January 1953, Zagreb

Date (from – until) 2014-today  
 Institution University of Split  
 Degree Full Professor  
 Work field Biological Physics

### WORK EXPERIENCE<sup>1</sup> (CHRONOLOGICALLY\*)

Date (from – until) 2004-today  
 Institution Institute of Physics  
 Position Senior Research Advisor  
 Work field Natural sciences; Physics; Condensed Matter Physics: Strongly correlated systems: Charge and Spin Orders, Ferroelectricity and Dynamics in Transition Metal Oxides and Organic Superconductors; 2D Organic Superconductors; Structure and Dynamics of Bio-Polyelectrolytes

### WORK EXPERIENCE<sup>2</sup> (CHRONOLOGICALLY\*)

Date (from – until) 1999-2002  
 Institution Institute of Physics  
 Position Research Advisor  
 Work field Natural sciences; Physics; Condensed Matter Physics: Layered Organic Superconductors, Dynamics of Charge and Spin Orders in Commensurate and Incommensurate quasi-one-dimensional materials

<sup>1,2,3</sup> Please add rows to enter all required information

\* all information in the document should be entered chronologically – from the most recent to the oldest

<sup>2,3</sup> Please add rows to enter all required information

\* all information in the document should be entered chronologically – from the most recent to the oldest

**WORK EXPERIENCE<sup>3</sup>**  
(CHRONOLOGICALLY\*)

Date (from – until) 1991-1999  
 Institution Institute of Physics  
 Position Senior Research Associate  
 Work field Natural sciences; Physics; Condensed Matter Physics: Charge and Spin Density Waves and Superconductivity in Organic Quasi-One-Dimensional Conductors and Superconductors: Influence of Disorder on the Electrical Transport and Ground State, Influence of Magnetic Field and Pressure on Transport, Dynamics and Stability of Phases; Non-linear Effects

**WORK EXPERIENCE<sup>4</sup>**  
(CHRONOLOGICALLY\*)

Date (from – until) 1986-1991  
 Institution Institute of Physics  
 Position Research Associate  
 Work field Natural sciences; Physics; Condensed Matter Physics: Linear and Non-linear Transport in the Spin-Density Wave Phase; Influence of Disorder on the Non-linear Transport; Influence of Pressure on the Phase Diagram of the Quasi-One-Dimensional Conductors

**WORK EXPERIENCE<sup>5</sup>**  
(CHRONOLOGICALLY\*)

Date (from – until) 1977-1981  
 Institution Institute of Physics  
 Position Research Assistant  
 Work field Natural sciences; Physics; Condensed Matter Physics: Research in Calorimetric Properties of the Phase Transitions in Inorganic Quasi-One-Dimensional Conductors

**EDUCATION<sup>6</sup>**  
(CHRONOLOGICALLY)

Date 1981-1986  
 Place Orsay, France  
 Institution Laboratoire de Physique des Solides, Université Paris-Sud  
 Title of qualification awarded Doctorat d'Etat es-Sciences Physiques

**EDUCATION<sup>7</sup>**  
(CHRONOLOGICALLY)

Date 1977-1981  
 Place Zagreb  
 Institution University of Zagreb - Postgraduate study of Solid State Physics  
 Title of qualification awarded Master of Science

**EDUCATION<sup>8</sup>**  
(CHRONOLOGICALLY)

Date 1971-1977

<sup>3,2,3</sup> Please add rows to enter all required information

\* all information in the document should be entered chronologically – from the most recent to the oldest

<sup>4,2,3</sup> Please add rows to enter all required information

\* all information in the document should be entered chronologically – from the most recent to the oldest

<sup>5,2,3</sup> Please add rows to enter all required information

\* all information in the document should be entered chronologically – from the most recent to the oldest

Place	Zagreb
Institution	Faculty of Science, University of Zagreb
Title of qualification awarded	Graduated Engineer in Physics (Bachelor in Physics)

### TRAINING (CHRONOLOGICALLY)

Year	1987; one-year
Place	Orsay, France
Institution	Laboratoire de Physique des Solides, Université Paris-Sud
Subject and skills covered	Natural sciences; Physics; Condensed Matter Physics: Organic Conductors and Superconductors; Experimental Low Temperature Physics

### LANGUAGES

<b>MOTHER TONGUE</b>	Croatian
<b>ENGLISH LANGUAGE</b>	
Speaking	Fluent
Writing	Excellent
Reading	Excellent

### OTHER FOREIGN LANGUAGES<sup>9</sup>

Language	French
Speaking	Very good
Writing	Very good
Reading	Very good

### OTHER FOREIGN LANGUAGES<sup>10</sup>

Language	German
Speaking	Basic proficiency
Writing	Working knowledge
Reading	Working knowledge

### RESEARCH AND OTHER PROJECTS

(CHRONOLOGICALLY; LEADER AND ASSOCIATES; FUNDING SOURCE)

- "Strongly Correlated Electrons in Layered Organics and Manganites: Low Frequency Excitations and Non-linear Dynamics"; leader: Silvia Tomić (2014-2018); associates: Bojana Korin-Hamzić (IPhyZg), Tomislav Ivek (IPhyZg), Matija Čulo (IPhyZg), Marko Pinterić (Uni Maribor), Amir Hamzić (FS UniZgb), Mario Basletić (FS UniZgb), Emil Tafra (FS UniZgb); CSF
- „Signatures of Dirac electrons in BEDT-TTF salts under pressure“, leaders: Silvia Tomić (IPhyZg) and Martin Dressel (1.Physikalisches Institut, Universität Stuttgart); (1.1.2013. – 31.12.2014); associates: T. Ivek (UniStuttgart), B. Korin-Hamzić (IPhyZg), M.Čulo (IPhyZg), T.Knoblauch (UniStuttgart), E.Tafra (UniZagreb); DAAD project DR 228/29-1
- "Frequency-Dependent Conductivity of Charge Ordering Phases of Two-Dimensional Organic Metals: Search for the Anisotropic Dispersion and Collective Excitations", leaders: Silvia Tomić (IPhyZg) and Martin Dressel (1.Physikalisches Institut, Universität Stuttgart); (1.1.2008 – 31.12.2010); associates: B. Korin-Hamzić (IPhyZg), T. Vuletić (IPhyZg), T. Ivek (IPhyZg), N.Drichko (UniStuttgart), B.Gorshunov (UniStuttgart), C.Clauss (UniStuttgart), D.Schweitzer (UniStuttgart); Deutsche Forschungsgemeinschaft (DFG) project DR 228/29-1
- "Strongly correlated inorganic, organic and biomaterials" 035-0000000-2836; leader: Silvia Tomić (2007-2014); associates: Sanja Dolanski Babić (MSUniZg), Bojana Korin-Hamzić (IPhyZg), Tomislav Ivek (IPhyZg), Tomislav Vuletić (IPhyZg), Matija Čulo (IPhyZg), Danijel Grgičin (IPhyZg); MSES
- "Broad-Band Optical Spectroscopy of Low-Dimensional Quantum Spin Systems"; leaders

Martin Dressel and Boris Gorshunov (1.Physikalisches Institut, Universität Stuttgart); (1.2.2003. – 31.1.2005); Deutsche Forschungsgemeinschaft (DFG); associates: S.Tomic (IPhyZg), T.Vuletić (IPhyZg), B.Korin-Hamzić (IPhyZg)

- "Systems of reduced dimensionality: from synthetic organic to bio-materials" 0035015; leader: Silvia Tomić (2002-2006); associates: Sanja Dolanski Babić (MSUniZg), Bojana Korin-Hamzić (IPhyZg), Tomislav Vuletić (IPhyZg), Tomislav Ivek (IPhyZg), M.Pinterić (IPhyZg), MSES
- "Dynamical and conformational properties of native DNA in varying chemical environment", 1.5.2002.- 30.4.2004); leader: Silvia Tomić (IPhyZg) and 3.Physikalisches Institut, Universität Stuttgart (J.U.von Schütz); associates: T. Vuletić (IPhyZg), Sanja Dolanski Babić (MSUniZg); project in the framework of bilateral collaboration with Germany
- "Frequency-dependent conductivity of commensurate density waves in organic metals: a search for the pinned mode", leaders: Silvia Tomić (IPhyZg) and M.Dressel (1.Physikalisches Institut, Universität Stuttgart); (1.11.2001 – 31.12.2002); associates: B. Korin-Hamzić (IPhyZg), T. Vuletić (IPhyZg), M.Pinterić (IPhyZg); Deutsche Forschungsgemeinschaft (DFG) project 436 KRO 113/5/0-1
- "The nature of the low temperature density wave, its pinning and the superconducting ground state in anisotropic radical ion salts", (1999-2001); leader: Silvia Tomić (IPhyZg) and 3.Physikalisches Institut, Universität Stuttgart (J.U.von Schütz, D.Schweitzer); associates: B. Korin-Hamzić (IPhyZg), T. Vuletić (IPhyZg), M.Pinterić (IPhyZg); project in the framework of bilateral collaboration with Germany
- "Novel electronic states in molecular conductors" 00350103, leader: Silvia Tomić (1996-2002); associates: B.Korin-Hamzić (IPhyZg), N.Biškup (IPhyZg), T. Vuletić (IPhyZg), M.Pinterić (IPhyZg); MSES
- "Collective charge response of charge density waves and antiferromagnetic phases in organic metals", (1995-1998); leader: Silvia Tomić (IPhyZg) and 3.Physikalisches Institut, Universität Stuttgart (J.U.von Schütz, D.Schweitzer); associates: N.Biškup (IPhyZg), Sanja Dolanski Babić (MSUniZg), Bojana Korin-Hamzić (IPhyZg), M.Pinterić (IPhyZg); project in the framework of bilateral collaboration with Germany
- "Organic metals: electrical transport in high-temperature phase and in the ground state (antiferromagnetic and superconducting)", (1995-1997); leader: Silvia Tomić (IPhyZg), Laboratoire de Physique des Solides, Université Paris-Sud (D.Jérôme); project in the framework of collaboration between CNRS and Croatia
- "Single-Particle and Collective Mechanism for the Electrical Conductivity in Organic Conductors", (1992-1994); leader: Silvia Tomić (IPhyZg), Laboratoire de Physique des Solides, Université Paris-Sud (D.Jérôme); project in the framework of collaboration between CNRS and Croatia
- "Organic Conductors and Superconductors", (1991-1994); proposal leader: John Cooper, leader: Silvia Tomić (IPhyZg), Université Paris-Sud, University of Copenhagen, University of Stuttgart; EEC projekt CI1-CT90-0863 (CD)
- "Novel anisotropic conductors and superconductors", leader: Silvia Tomić (IPhyZg) (1991-1996); MSES
- "Synthetic conductors and superconductors"; leader: John Cooper (IPhyZg), executive leader: Silvia Tomić (IPhyZg) (1989-1991); MSES

## TEACHING

(CHRONOLOGICALLY; UNDERGRADUATE, GRADUATE , POSTGRADUATE STUDY PROGRAMMES

- Modul: „Dielectric Spectroscopy“; within course Experimental methods in biophysics (I.Weber iand collaborators) at the Doctoral study in Physics, Biophysics at the faculty of Science, University of Zagreb, (since 2009-today)
- „Structure and interactions in polyelectrolytes: basic theory and experimental verification“, Elective course at the Doctoral study in Biophysics at the University of Split (since 2008-today),
- „Exercises in solid state physics“ at graduate study of physics at the Faculty of Science, University of Zagreb (2 terms, 1978-1979.)
- "Laboratory exercises in general physics" at graduate study of physics at the Faculty of Science, University of Zagreb (2 terms, 1977-1978.)

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

## DOCTORAL THESES

- T.Ivek: «Charge orderings in strongly correlated systems», mentor: Silvia Tomić, Faculty of Science, University of Zagreb (30 June 2011.)
- S.Dolanski Babić: "Electric and Dielectric Properties of genomic DNA Aqueous Solutions", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (16 October 2008.)
- T.Vuletić: «Collective electronic states of new quasi-one-dimensional materials», mentor: Silvia Tomić, Faculty of Science, University of Zagreb (15 October 2004.)
- M.Pinterić: ""Electronic properties of the superconducting and density wave phases in organic anisotropic materials", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (14 March 2003)
- N.Biškup: "Single-Particle and Collective Electrical Transport in Bechgaard Salts", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (1996).

## MASTER OF SCIENCES THESES

- S.Dolanski Babić: "Influence of Disorder on the Electron Gas Properties in Organic Anisotropic systems", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (8 April 2002).
- M.Pinterić: "Low-Frequency Dielectric Spectroscopy and Non-linear Electrical Transport of Spin Density Wave", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (31 March 2000).

## DIPLOMA THESES

- I.Kovačević: „Electrical Transport in the Charge Ordered Phase of the Organic Conductor  $\alpha$ -(BEDT-TTF)<sub>2</sub>I<sub>3</sub>, mentor: Silvia Tomić, Faculty of Science, University of Zagreb (13 July 2011)
- D.Grgičin: "Electrical Conductivity of Sodium salt hyaluronic acid solutions", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (9 November 2009)
- Z.Gregurić: "Dielectric relaxation of hyaluronic acid aqueous solutions", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (11 July 2008)
- A.Vojvodić: „Dielectric relaxation of colloidal solutions of polystyrene latex nanoparticles", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (2006).
- K.Radmanović: «Chamber for dielectric constant measurements of samples in aqueous solutions», mentor: Silvia Tomić, Faculty of Science, University of Zagreb (2006).
- T.Ivek: «Charge density wave in quasi-one-dimensional cuprates», mentor: Silvia Tomić, Faculty of Science, University of Zagreb (2004).
- M.Lončarić: "Transport properties of charge density wave at low temperatures", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (2001).
- T.Vuletić: "Non-linear conductivity of spin density wave in Bechgaard salts", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (1998).
- M.Pinterić: "Dielectric response of commensurate charge density wave", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (1997).
- A.Omerzu: "Dielectric response of spin density wave", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (1994).
- M.Basletić: "Magnetoresistance of anisotropic organic conductor (TMTSF)<sub>2</sub>NO<sub>3</sub>", mentor: Silvia Tomić (with A.Hamzić), Faculty of Science, University of Zagreb (1992).
- S.Dolanski Babić: "Influence of disorder on electrical conductivity and ground state of organic conductors", mentor: Silvia Tomić, Faculty of Science, University of Zagreb (1991).

## INTERNSHIP THESES

- Bruno Frka-Petešić: "Utilisation de la spectroscopie diélectrique basse fréquence dans l'étude de systèmes colloïdaux", mentor: Silvia Tomić, internship thesis in the framework of graduate study-master level in physics at Université Denis Diderot ParisVII (2005).

**VISITS TO FOREIGN RESEARCH AND EDUCATION INSTITUTIONS**

(CHRONOLOGICALLY; ONLY VISITS LONGER THAN 3 MONTHS)

Since my postdoctoral one-year position (CNRS position) (1987-1988) in Laboratoire de Physique des Solides, University Paris-Sud, all my stays in foreign research institutions were always shorter than 3 months. In 2018, I spent one month in Laboratoire de Physique des Solides, University Paris-Sud as an invited professor.

**AWARDS AND RECOGNITIONS**

(CHRONOLOGICALLY)

- 2008-2018: Membership in Croatian Academy of Sciences and Arts: Associate member in The Department of Mathematical, Physical and Chemical Sciences
- 2018-today: Membership in Croatian Academy of Sciences and Arts: Associate member in The Department of Mathematical, Physical and Chemical Sciences, second election

**ORGANIZATIONAL SKILLS AND COMPETENCES**

(CHRONOLOGICALLY; ORGANIZATION OF HOME AND INTERNATIONAL SCIENCE EVENTS)

- 2012: Chair the Scientific Advisory Committee of European Physical Journal: organization of the SAC meeting and technical organization of the Steering Committee meetings, 20-21 April 2012, Zagreb, Croatia
- 2007-2010 president of the Croatian Physical Society
- Member of the Organisation Committee of Regional Biophysical Conference 2010 (Primošten, 2010)
- 2006-: founder and co-organiser of international workshop „Christmas Biophysics Workshop“
- 1997-today: member of International Advisory Committee series of International Conference of Science and Tehnology of Synthetic Metals
- 1994 – member of the Organisation committee of the First Scientific Meeting of the Croatian Physical Society

**MEMBERSHIP IN SCIENCE ORGANIZATIONS AND BODIES**

(CHRONOLOGICALLY; HOME AND INTERNATIONAL ORGANIZATIONS AND BODIES)

- 2013-today: Member of the MPNS COST Action MP1204 „TERA-MIR Radiation: Materials, Generation, Detection and Applications“
- 2013-2016: Member of the Council for Natural Sciences
- 2007-2010: President of the Croatian Physical Society
- 2007-2010: Member of the European Physical Society Council
- 2007-today: Fellow of The Institute of Physics
- 2004-today: Member of the American Physical Society
- 1994-today: Member of the Croatian Physical Society

**COMMISSIONS, COMMITTEES, BOARDS AND WORK GROUPS**

(CHRONOLOGICALLY; HOME AND INTERNATIONAL)

- 2013: Past-Chair of the Scientific Advisory Committee of European Physical Journal
- 2012: Chair the Scientific Advisory Committee of European Physical Journal
- 2011: Chair-elect of the Scientific Advisory Committee of European Physical Journal
- 2009 – 2014: member of the Scientific Advisory Committee of European Physical Journal
- 2002: member of the Evaluation Committee for national scientific projects in physics - 1.02 physics
- 2001- 2003: president of the Scientific council of the Institute of Physics, Zagreb
- 2000-2003: member of the National Science Awards Committee
- 1994: member of the Managing Board of the Institute of Physics, Zagreb
- 1992-1996: president of the State Committee for experimental projects in physics for high school students

**PAPERS**

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

**LIST OF PUBLICATIONS**

12Dec 2020: 137 papers, total times cited: 2189 after researcherid.com search  
SOS: not all individual papers citations are corrected; the listed below is from 18Oct2013

13Dec2012: in addition 12 papers and PhD thesis: times cited: 39 after direct search Web of knowledge

17Nov 2020: Total No of Publications: 149;\_Total Times Cited $\geq$  2228

17Nov 2020: Total IF: 395.502

17Nov 2020: h-index: 27

*citations of papers below are from 29July 2015*

**A. SCIENTIFIC PAPERS PUBLISHED IN INTERNATIONAL JOURNALS IN CURRENT CONTENTS**

- "Molecular quantum materials: electronic phases and charge dynamics in two-dimensional organicsolids", M.Dressel and S.Tomic, *Advances in Physics* 69:1, 1-120 (2020); DOI: 10.1080/00018732.2020.1837833
- Times Cited; IF= 30.917
- "New insights into the structural properties of  $\kappa$ -(BEDT-TTF)<sub>2</sub>Ag<sub>2</sub>(CN)<sub>3</sub> spin liquid", P. Foury-Leylekian, V. Ilakovac, P. Fertey, V. Baledent, O. Milat, K. Miyagawa, K. Kanoda, T. Hiramatsu, Y. Yoshida, G. Saito, P. Alemany, E. Canadell, S. Tomic and J.-P. Pouget, *Acta Cryst. B* **76**, 581-590 (2020); <https://doi.org/10.1107/S2052520620005545>  
Times Cited; IF= 2.048
- „Unified Assessment of the Effects of Van der Waals Interactions on the Structural and Electronic Properties of Some Layered Organic Solids  $k$ -(BEDT-TTF)<sub>2</sub>X", P.Lazic, O.Milat, B.Gumhalter and S.Tomic, *Crystals* **2019**, 9, 348.  
doi:10.3390/cryst9070348  
Times Cited; IF=2.061
- „Influence of chemical substitution on broadband dielectric response of barium-lead M-type hexaferrite", Liudmila N. Alyabyeva, Victor I. Torgashev, Elena S. Zhukova, Denis A. Vinnik, Anatoliy S. Prokhorova, Svetlana A. Gudkovac, David Rivas Góngora, Tomislav Ivek, Silvia Tomić, Nikolina Novosel, Damir Starešinić, Damir Dominko, Zvonko Jagličić, Martin Dressela, Dmitry A. Zherebtsov, Boris P. Gorshunov, *New Journal of Physics* (2019), <https://doi.org/10.1088/1367-2630/ab2476>



Times Cited: ; IF= 3.579

- „Hall effect study of kappa-(ET)<sub>2</sub>X family: evidence for Mott-Anderson localization“, M. Culo, E. Tafra, M. Mihaljevic, M. Basletic, M. Kuvezdic, T. Ivek, A. Hamzic, S. Tomic, T. Hiramatsu, Y. Yoshida, G. Saito, J. A. Schlueter, M. Dressel, and B. Korin-Hamzic, *Phys.Rev.* **B99**, 045114 (2019).

Times Cited: ; IF= 3.813

- „Quantum spin liquids unveil the genuine Mott state“, A. Pustogow, M. Bories, A. Löhle, R. Rösslhuber, E. Zhukova, B. Gorshunov, S. Tomić, J. A. Schlueter, R. Hübner, T. Hiramatsu, Y. Yoshida, G. Saito, R. Kato, T.-H. Lee, V. Dobrosavljević, S. Fratini and M. Dressel, *Nature Materials* **17**, 6Aug (2018); <https://doi.org/10.1038/s41563-018-0140-3>.

Times Cited: ; IF= 47.534

- „Importance of van der Waals interactions and cation-anion coupling in an organic quantum spin liquid“, P. Lazic, M. Pinteric, D. Rivas Gongora, A. Pustogow, K. Treptow, T. Ivek, O. Milat, B. Gumhalter, N. Doslic, M. Dressel and S. Tomic, *Phys.Rev.* **B97**, 245134 (2018).

Times Cited: ; IF= 3.718

- „Electrodynamics in Organic Dimer Insulators Close to Mott Critical Point“, M. Pinteric, D. Rivas Gongora, Z. Rapljenovic, T. Ivek, M. Culo, B. Korin-Hamzic, O. Milat, B. Gumhalter, P. Lazic, M. Sanz Alonso, W. Li, A. Pustogow, G. Gorgen Lesseux, M. Dressel and S. Tomic, *Crystals* **8**, 190 (17p) (2018).

Times Cited: ; IF= 1.566

- „kappa-(BEDT-TTF)<sub>2</sub>Cu<sub>2</sub>(CN)<sub>3</sub> spin liquid: beyond the 2 average structure“, P. Foury-Leylekian, V. Ilakovac, V. Balédent, P. Fertey, A. Arakcheeva, O. Milat, D. Petermann, G. Guillier, K. Miyagawa, K. Kanoda, P. Alemany, E. Canadell, S. Tomic and J-P. Pouget, *Crystals* **8**, 158 (2018).

Times Cited: ; IF= 1.566

- “Resonant inelastic x-ray scattering probes the electron-phonon coupling in the spin liquid kappa-(BEDT-TTF)<sub>2</sub>Cu<sub>2</sub>(CN)<sub>3</sub>“, V. Ilakovac, S. Carniato, P. Foury-Leylekian, S. Tomić, J.-P. Pouget, P. Lazić, Y. Joly, K. Miyagawa, K. Kanoda and A. Nicolaou, *Phys.Rev.* **B96**, 184303 (2017).

Times Cited: ; IF= 3.718

- “Metal-Insulator Transition in the Dimerized Organic Conductor kappa-(BEDT-TTF)<sub>2</sub>Hg(SCN)<sub>2</sub>Br“, T. Ivek, R. Beyer, S. Badalov, M. Čulo, **S. Tomić**, J. S. Schlueter, E. I. Zhilyaeva, R. N. Lyubovskaya, and M. Dressel, *Phys. Rev* **B96**, 085116 (2017).

Times Cited: ; IF= 3.718

- “Semimetallic and charge-ordered alpha-(BEDT-TTF)<sub>2</sub>I<sub>3</sub>: on the role of disorder in dc transport and dielectric properties“, T. Ivek, M. Čulo, M. Kuveždić, E. Tutiš, M. Basletić, B. Mihaljević, E. Tafra, S. Tomić, A. Loehle, M. Dressel, D. Schweitzer and B. Korin-Hamzic, *Phys. Rev. B* **96**, 075141 (2017).

Times Cited: ; IF= 3.718

- “Magnetotransport properties of La<sub>1-x</sub>CaxMnO<sub>3</sub> (0.52 ≤ x ≤ 0.75): Signature of phase coexistence“, M. Culo, M. Basletic, E. Tafra, A. Hamzic, **S. Tomic**, F. Fischgraber, V. Moshnyagac, B. Korin-Hamzic, *Thin Solid Films* **631**, 205 (2017).

Times Cited: ; IF= 1.790

- “Anion effects on electronic structure and electrodynamic properties of the Mott insulator kappa-(BEDT-TTF)<sub>2</sub>Ag<sub>2</sub>(CN)<sub>3</sub>“, M. Pinteric, P.Lazic, A.Pustogow, T. Ivek, M.Kuveždic, O.Milat, B.Gumhalter, M. Basletic, M. Culo, B. Korin-Hamzic, A.Loehle, R. Huebner, M. Sanz Alonso, T. Hiramatsu, Y. Yoshida, G. Saito, M. Dressel and **S.Tomic**, *Phys.Rev.* **B94**, 161105(R) (2016).

Times Cited: ; IF= 3.718

- “Effect of magnesium ions on the structure of DNA thin films: an infrared spectroscopy study“, K. Serec, S. Dolanski Babić, R. Podgornik and **S. Tomić**, *Nucleic Acid Research* **44**, 8456-8464 (2016).

Times Cited: ; IF= 9.202

- „Lattice vibrations of the charge-transfer salt kappa-(BEDT-TTF)<sub>2</sub>Cu<sub>2</sub>(CN)<sub>3</sub>: Comprehensive explanation of the electrodynamic response in a spin-liquid compound“, M.Dressel, P.Lazic, A.Pustogow, E.Zhukova, B.Gorshunov, J.A.Schlueter, O.Milat, B.Gumhalter and **S.Tomic**, *Phys.Rev.* **B 93**, 081201 (R) (5+8) (2016).

Times Cited: 2; IF= 3.664

- “Ferroelectricity in molecular solids: a review of electrodynamic properties“, **S.Tomic** and M.Dressel, *Rep. Prog. Phys.* **78**, 096501 (26pp) (2015).

Times Cited: 4; IF= 17.062

- „Anisotropic charge dynamics in the quantum spin-liquid candidate  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu<sub>2</sub>(CN)<sub>3</sub>“, M.Pinterić, M.Čulo, O.Milat, M.Basletić, B.Korin-Hamzić, E.Tafra, A.Hamzić, T.Ivek, T.Peterseim, K.Miyagawa, K.Kanoda, J.A.Schlueter, M.Dressel, and **S.Tomic**, Phys.Rev.**B90**, 195139 (1-13) (2014).

Times Cited: 10; IF= 3.664

- „The effect of magnesium ions on dielectric relaxation in semidilute DNA solutions“ D.Grgicin, S.Dolanski Babić, T.Ivek, **S.Tomic**, R.Podgornik, Phys.Rev.**E88**, 052703 (2013).

Times Cited: ; IF= 2.3

- „Magnetic ordering and charged dynamics in  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu[N(CN)<sub>2</sub>]Cl“ **S.Tomic**, M.Pinteric, T.Ivek, K.Sedlmeier, R.Beyer, D.Wu, J.A.Schlueter, D.Schweitzer, M.Dressel, J.Phys.:Condens.Matter **25**, 436004 (2013).

Times Cited: 1 ; IF= 2.332

- „Anisotropic charge dynamics in the quantum spin-liquid candidate  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu<sub>2</sub>(CN)<sub>3</sub>“, M.Pinterić, M.Čulo, O.Milat, M.Basletić, B.Korin-Hamzić, E.Tafra, A.Hamzić, T.Ivek, T.Peterseim, K.Miyagawa, K.Kanoda, J.A.Schlueter, M.Dressel, and **S.Tomic**, Phys.Rev.**B90**, 195139 (1-13) (2014).

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- "Coexistence of superconductivity and spin density wave orderings in Bechgaard and Fabre salts", C.Pasquier, P.Auban-senzier, T.Vuletić, **S.Tomić**, M.Héritier and D.Jérôme, *J.de Physique IV* **12**, PR9-197 – PR9-200 (2002).

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- "Modalities od self-organized charge response in low dimensional systems", **S.Tomić**, T.Vuletić, M.Pinterić and B.Korin-Hamzić, *J.de Physique IV France* **12**, PR9-211 – PR9-214 (2002).

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- "In-Plane and Out-of-Plane Superfluid Density of the Layered Organic Superconductor κ-(BEDT-TTF)<sub>2</sub>Cu[N(CN)<sub>2</sub>]Br ", **S.Tomić**, M.Pinterić,□K.Maki,

M.Prester, Đ.Drobac, O.Milat, D.Schweitzer, I.Heinen, W.Strunz, *Journal de Physique IV France* **10**, Pr3 161-166 (2000).

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- "Superconducting State in the Layered Organic Superconductor  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu[N(CN)<sub>2</sub>]Br", M.Pinterić, M.Prester, **S.Tomić**, K.Maki, D.Schweitzer, I.Heinen and W.Strunz, *Synth.Metals* **103**, 1869-1872 (1999).

Times Cited: 1; IF = 1.376

- "Electrical Transport Measurements on TDAE-C<sub>60</sub> Single Crystals", A.Omerzu, D.Mihailović, **S.Tomić**, O.Milat and N.Biškup, *Synthetic Metals* **85**, 1723 (1997).

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- "Magnetic Field Influence on the Low and High Electric Field Transport in the Spin-Density Wave State of the Organic Conductor (TMTSF)<sub>2</sub>NO<sub>3</sub>", M.Basletić, N.Biškup, **S.Tomić**, B.Korin-Hamzić and A.Hamzić, *Synthetic Metals* **56**, 2593 (1993).

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- "Non-Ohmic Electrical Transport in the Spin-Density Wave State of Organic Conductors", **S.Tomić**, J.R.Cooper, W.Kang and D.Jérôme, *Fizika* **21**, Suppl.3., 55 (1989).

Times Cited: 2

- "Spin-Density Wave in the Organic Conductor (TMTSF)<sub>2</sub>NO<sub>3</sub>: Antiferromagnetic Critical Effects and Non-Linear Transport", **S.Tomić**, D.Jérôme, J.R.Cooper and K.Bechgaard, *Synthetic Metals* **27**, B645 (1988).

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- "Pressure-Temperature Phase Diagram of the Organic Conductor (DM-DCNQI)<sub>2</sub>Cu", **S.Tomić**, D.Jérôme, A.Aumüller, P.Erk, S.Hig and J.U.von Schütz, *Synthetic Metals* **27**, B281 (1988).

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- "Calorimetric Study of the Phase Transitions in NbSe<sub>3</sub>", **S.Tomić**, K.Biljaković, D.Djurek and J.R.Cooper, *Chemica Scripta* **17**, 189 (1981).

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- "Specific-heat Measurements on TaS<sub>3</sub>", K. Biljaković, **S. Tomić**, *Chemica Scripta* **17**, 196 (1981).

Times Cited: 0; IF = 0.95

### C.3. PUBLISHED POSTERS AT INTERNATIONAL CONFERENCES AND SUMMER SCHOOLS

- "Two-dimensional variable range hopping in the spin-liquid candidate  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu<sub>2</sub>(CN)<sub>3</sub>", M.Čulo, E.Tafra, M.Basletić, **S.Tomić**, A.Hamzić, B.Korin-Hamzić, M.Dressel, J.A.Schlueter, *Physica B* **460**, 208 (2015).

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- "Non-ohmic electrical transport in the Peierls-Mott state of deuterated copper-DCNQI systems", T.Vuletić, M.Pinterić, M.Lončarić, **S.Tomić** and J.U.von Schütz, *Synthetic Metals* **120**, 1001-1002 (2001).

Times Cited: 5; IF = 1.158

- "Single-Particle and Spin-Density Wave Charge Dynamics in (TMTSF)<sub>2</sub>PF<sub>6</sub> and (TMTSF)<sub>2</sub>AsF<sub>6</sub>: a Comparative Overview", T.Vuletić, D.Herman, N.Biškup, M.Pinterić, A.Omerzu, **S.Tomić** and M.Nagasawa, *Proceedings of ECRYS-99* (edited by S.Brazovski and P.Monceau), *Journal de Physique IV (Colloques)* **9**, no.10, 275 - 277 (1999).

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- "Out-of-Plane Superfluid Density of a Layered Organic Superconductor: the Coherent Josephson Tunneling", **S.Tomić**, M.Pinterić, K.Maki, M.Prester, Đ.Drobac, O.Milat, D.Schweitzer, I.Heinen and W.Strunz, *Proceedings of ECRYS-99* (edited by S.Brazovski and P.Monceau), *Journal de Physique IV (Colloques)* **9**, no.10, 301 (1999).

Times Cited: IF = 0.381



- "Charge Localization in  $[(\text{TMTTF})_{0.5}(\text{TMTSF})_{0.5}]_2\text{ReO}_4$ : a Pressure Study", **S.Tomić**, P.Auban-Senzier and D. Jérôme, *Synth.Metals* **103**, 2197-2198 (1999).  
Times Cited: 1 ; IF = 1.376
- "Low Frequency Dielectric Response in Spin Density Wave Phase of Bechgaard Salts", N.Biškup, T.Vuletić, D.Herman, **S.Tomić**, M.Nagasawa and K.Bechgaard, *Synth.Metals* **103**, 2052-2053 (1999).  
Times Cited: 0; IF = 1.376
- "Collective Charge Response in the Weak Ferromagnetic Phase of  $\kappa$ -(BEDT-TTF) $_2$ Cu[N(CN) $_2$ ]Cl", M.Pinterić, N.Biškup, **S.Tomić**, D.Schweitzer, W.Strunz and I.Heinen, *Synth.Metals* **103**, 1937 (1999).  
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- "Non-Ohmic Electrical Transport in the Charge-Density Wave State of  $(2,5(\text{OCH}_3)_2\text{DCNQI})_2\text{Li}$ ", M.Pinterić, N.Biskup, **S.Tomić** and J.U.von Schütz, *Synth.Metals* **103**, 2185-2186 (1999).  
Times Cited: 6; IF = 1.376
- "Galvanomagnetic Properties of Quasi-1D Organic Conductors  $(\text{TMTSF})_2\text{NO}_3$  and  $(\text{TMTTF})_2\text{Br}$ ", B.Korin-Hamzić, M.Basletić, D.Zanchi, A.Hamzić, **S.Tomić** and J.M.Fabre, *Synth.Metals* **85**, 1535 (1997).  
Times Cited: 1; IF = 1.254
- "Low-Frequency Dielectric Relaxation of Spin-Density Wave in the Bechgaard Salt  $(\text{TMTSF})_2\text{PF}_6$ ", **S.Tomić**, N.Biškup and A.Omerzu, *Synthetic Metals* **85**, 1597 (1997).  
Times Cited: 8; IF = 1.254
- "Enhanced Charge Localization in the Organic Alloys  $[(\text{TMTSF})_{1-x}(\text{TMTTF})_x]_2\text{ReO}_4$ ", V.Ilakovac, S.Ravy, J.P.Pouget, C.Lenoir, P.Batail, K.Boubekeur, S.Dolanski Babić, N.Biškup, B.Korin-Hamzić, **S.Tomić** and C.Bourbonnais, *Synthetic Metals* **70**, 753 (1995).  
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- "Magnetotransport Effects in the Spin-Density Wave State of the Organic Conductor  $(\text{TMTSF})_2\text{NO}_3$ ", M.Basletić, A.Hamzić, N.Biškup, **S.Tomić**, B.Korin-Hamzić, K.Maki, J.M.Fabre and K.Bechgaard, *J.de Physique* **3**, C2-315 (1993).  
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- "Non-Linear Electrical Transport Effects in the Anion Induced Charge-Density Wave State of the Organic Conductors  $(\text{TMTSF})_2\text{ReO}_4$  and  $(\text{TMTSF})_2\text{FSO}_3$ ", N.Biškup, M.Basletić, **S.Tomić** and K.Maki, *Synthetic Metals* **56**, 2611 (1993).  
Times Cited: 0; IF = 1.254
- "Electrical Transport in the Organic Superconductor  $\beta$ -(BEDT-TTF) $_2$ AuI $_2$ : Influence of X-ray Induced Defects on the Normal Phase and Superconducting Ground State", N.Biškup, S.Dolanski Babić, B.Hamzić and **S.Tomić**, *Synthetic Metals* **56**, 2821 (1993).  
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- "Influence of Electron-Electron Scattering on the Electrical Conductivity in Organic Conductors", N.Biškup, S.Dolanski Babić, B.Korin-Hamzić and **S.Tomić**, *Synthetic Metals* **56**, 1762 (1993).  
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- "Search for Nonohmic Electrical Transport in the Anion Induced Charge-Density Wave State of Organic Conductors", **S. Tomić**, J.R.Cooper, D.Jerome, *Synthetic Metals* **43**, 4045 (1991).  
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- "A Hidden Low-Temperature Phase in the Organic Conductor  $(\text{TMTSF})_2\text{ReO}_4$ ", **S. Tomić**, D.Jerome, *Synthetic Metals* **42**, 1948 (1991).  
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- "New Results on the Phase Diagram of the  $(\text{TMTSF})_2\text{FSO}_3$  Salt", P.Auban, V.Čelebonović, **S.Tomić**, D.Jérôme and K.Bechgaard, *Synth.Metals* **42**, 2281, 1991.  
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- "Non-Ohmic Electrical Transport in the Spin-Density Wave State of Organic Conductors", **S.Tomić**, J.R.Cooper, W.Kang and D.Jérôme, in "The Physics and Chemistry of Organic Superconductors", eds. G.Saito and S.Kagoshima, Springer-Verlag (1989), p111.  
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- "Pressure-Temperature Phase Diagram of  $(\text{DM-DCNQI})_2\text{Ag}$ : a Comparative Study with Related Compounds", R.T.Henriques, **S.Tomić**, W.Kang, D.Jérôme, F.Brisset, P.Batail, P.Erk, S.Hünig and J.U.von Schütz, *Synthetic Metals***27**, B333 (1988).

Times Cited: 7; IF = 1.47

- "Cation-Radical Salts of the Paramagnetic Hexanuclear Octahedral Halide Cluster  $\text{Nb Cl}_6$  : Preparation, Crystal Structure, Transport and Magnetic Properties of  $\text{D}(\text{Nb Cl}_6)(\text{CH Cl}_2)$  ( $\text{D}=\text{TMTSF}$  and  $\text{TMTTF}$ ) and  $(\text{TTF})(\text{Nb Cl}_6)(\text{Et N})(\text{CH CN})$ ", A.Penicaud, P.Batail, **S.Tomić**, D.Jérôme and C.Coulon, *Synthetic Metals***27**, B103 (1988).

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- "EPR Analysis of Antiferromagnetic Critical Effects in Organic Conductors", P.Baillargeon, C.Bourbonnais, **S.Tomić**, P.Vaca and C.Coulon, *Synthetic Metals***27**, B83 (1988).

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- "Shubnikov de Haas Oscillations and  $(0,1/2,1/2)$  Anion Ordering in  $(\text{TMTSF})_2\text{ReO}_4$  at 14kbar Observed by Transport Measurements", L.Brossard, **S.Tomić**, D.Mailly, D.Jérôme, M.Ribault and K.Bechgaard, *Physica***143B**, 409 (1986).

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- "Field Induced Phase Transitions in the Bechgaard Salts", M.Ribault, F.Pesty, L.Brossard, B.Pivetau, P.Garoche, J.R.Cooper, **S.Tomić**, A.Moradpour and K.Bechgaard, *Physica***143B**, 393 (1986).

Times Cited: 7; IF = 1.1

- "The Role of Anions in Determining the Ground State and the Low Temperature Behaviour of the Organic Alloy  $(\text{TMTSF})_2(\text{ClO}_4)_{1-x}(\text{ReO}_4)_x$ ,  $0 < x < 1$ ", **S.Tomić**, L.Brossard, R.C.Lacoe, D.Jérôme, M.Ribault, K.Bechgaard and G.Rindorf, *Physica***143B**, 375 (1986).

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- "Transport and Magnetic Properties on the Family of Perylene-dithiolate Conductors", R.T.Henriques, L.Alcaser, M.Almeida and **S.Tomić**, *Mol.Cryst.Liq.Cryst.***120**, 237 (1985).

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- "Magnetotransport and EPR Measurements on  $(\text{TSeT})_2\text{Br}$ ", C.Weyl, L.Brossard, **S.Tomić**, D.Mailly, D.Jérôme, B.Hilti and C.W.Mayer, *Mol.Cryst.Liq.Cryst.***120**, 263 (1985).

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- "Influence of the Anion Order on the Ground State of the Organic Conductor  $(\text{TMTSF})_2\text{ReO}_4$ ", **S.Tomić**, D.Jérôme and K.Bechgaard, *Mol.Cryst.Liq.Cryst.***119**, 241 (1985).

Times Cited: 5; IF = 1.22

- "Cooling Rate and Electric Field Effects in  $(\text{TMTSF})_2\text{FSO}_3$ ", **S.Tomić**, D.Jérôme and K.Bechgaard, *Mol.Cryst.Liq.Cryst.***119**, 59 (1985).

Times Cited: 2; IF = 1.22

- "Influence of the Disorder Potential of the Anions on the ground State of the Organic Alloy  $(\text{TMTSF})_2(\text{ClO}_4)_{1-x}(\text{ReO}_4)_x$ ", **S.Tomić**, D.Jerome, D.Mailly, M.Ribault and K.Bechgaard, *J.Physique Colloq.***44**, C3-1075 (1983).

Times Cited: 46; IF = 0.294

- "Influence of the Anion Disorder on the Low Temperature Behaviour of the Organic Superconductor  $(\text{TMTSF})_2\text{ClO}_4$ ", **S.Tomić**, D.Jérôme, P.Monod and K.Bechgaard, *J.Physique Colloq.***44**, C3-1083 (1983).

Times Cited: 16; IF = 0.294

- "Influence of Disorder on the Metal-Insulator Phase Transition in  $(\text{TMTSF})_2\text{BrO}_4$ ", **S.Tomić**, J.P.Pouget, D.Jerome, K.Bechgaard, J.M.Williams, *Journal de Physique* **44**, 1081 (1983).

Times Cited: 0, IF = 1.81

- "Non-linear Dielectric Properties of  $\text{NbSe}_3$  below the Peierls Transition at 145-K", D. Djurek, M. Prester, **S. Tomić**, *Mol.Cryst.Liq.Cryst.***86**, 2051 (1982).

Times Cited: 0; IF = 1.22

- "Specific Heat Measurements of the Quasi One-Dimensional Conductor  $\text{HMTTF-TCNQ}$ ", K.Biljaković-Franulović, **S.Tomić**, M.Prester and D.Djurek, *Fizika* **10**, Suppl.2., 254 (1978).

Times Cited: 0

## D. SCIENTIFIC PAPERS PRESENTED AT INTERNATIONAL CONFERENCES AND PUBLISHED IN BOOKS/PROCEEDINGS NOT IN CURRENT CONTENTS

- „DNA in aqueous solutions with repulsive interactions: structure determined on the basis of dielectric spectroscopy measurements“, **S.Tomić**, D.Grgičin, T.Vuletić, S. Dolanski Babić, T.Ivek, R.Podgornik, Bioinformatics and biological physics: proceedings of the scientific meeting, editor Vladimir Paar. Zagreb : Hrvatska akademija znanosti i umjetnosti, Odbor za bioinformatiku i biološku fiziku, Razred za matematičke, fizičke i kemijske znanosti, 2013. Str. 159-177.
- "Diffraction analysis of incommensurate modulation in „chain-ladder“ composite crystal (Sr/Ca/La)<sub>14</sub>Cu<sub>24</sub>O<sub>41</sub>", O.Milat, K.Salamon, **S.Tomić**, T.Vuletić and T.Ivek, 14th European Microscopy Congress, Aache, Germany, M. Luysberg, K. Tillmann, T. Weirich (ur.). Heidelberg : Springer-Verlag Berlin, 209-210 (2008).

Times Cited:

- "Properties of Mott-Peierls insulating phase in deuterated copper-DCNQI systems", M.Pinterić, T.Vuletić and **S.Tomić**, Proceedings of 39<sup>th</sup> International Conference on Microelectronics, Devices and Materials MIDEM'03, Ptuj, Slovenia, 231-236 (2003).

Times Cited:

- "The Low-Frequency Dielectric Response and Non-Linear Electrical Transport in  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu[N(CN)<sub>2</sub>]Cl", M.Pinterić, N.Biškup, **S.Tomić**, D.Schweitzer, W.Strunz and I.Heinen, Proceedings of 35<sup>th</sup> International Conference on Microelectronics, Devices and Materials MIDEM'99, Ljubljana, Slovenia, October 13-15 (1999), p.83-p.88.

Times Cited: 0

- "Transport Properties of Charge-Density Wave in the (2,5(OCH<sub>3</sub>)<sub>2</sub>DCNQI)<sub>2</sub>Li", M.Pinterić, **S.Tomić** and J.U.von Schütz, Proceedings of 34<sup>th</sup> International Conference on Microelectronics, Devices and Materials MIDEM'98, Rogaška Slatina, Slovenia, September 23-25 (1998), p.99-p.104.

Times Cited: 0

## THESE D'ETAT

- "Propriétés électroniques des composés (TMTSF)<sub>2</sub>X et de leurs alliages: rôle des anions sur l'état fondamental et le comportement de basse température", **S.Tomic**, Université Paris Sud 1986.

Times Cited: 27

## POPULAR PUBLICATIONS

- "The Croatian Physical Society, a small but vibrant and innovative association", **S.Tomic**, Europhysics News 42, 22 (2011).
- "Croatian Physical Society: present status and prospects", **S.Tomic**, I Nuovo Saggiatore 27, 58 (2011).

## OTHER RESEARCH ACTIVITIES

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

- 2014 - 2018: Editor – member of the Editorial Board in EPJPlus Journal
- 2013 Past-Chair of the Scientific Advisory Committee of European Physical Journal
- 2012 Chair of the Scientific Advisory Committee of The European Physical Journal
- 2011 Chair-elect of the Scientific Advisory Committee of The European Physical Journal
- 2009-2013: member of the Scientific Advisory Committee of The European Physical Journal

**COMPUTER SKILLS**

Yes, Microsoft programmes

**OTHER IMPORTANT SKILLS AND COMPETENCES**

- 2017-today: Member of the Council of the Doctoral Study in Physics at the University of Rijeka
- 2017: Member of the PhD committee and referee for the PhD thesis of M. Borovšak at University Ljubljana
- 2012-2015: Member of the Council of the Doctoral Study in Physics at the Faculty of natural Sciences, University of Zagreb
- 2011: Referee for the PhD thesis of S.Bernu at Universite Paris-Sud, Orsay
- 2007-today: Member of the Council of the Postgraduate Study in Biophysics at the University of Split
- 2010 : Member of the Habilitation committee of V.Ilakovac (habilitation de diriger des recherches) at Universite Pierre et Marie Curie, Paris
- 2007: Member of the Habilitation committee and referee for the habilitation of P.Foury (habilitation de diriger des recherches) at Universite Paris-Sud, Orsay
- 2006: Member of the PhD committee and referee for the PhD thesis of N.Joo at Universite Paris-Sud, Orsay
- 2005 : Member of the PhD committee and referee for the PhD thesis of C.Colin at Universite Pierre et Marie Curie, Paris
- 2000 : Member of the PhD committee and referee for the PhD thesis of D.Starešinić at Universite J.Fourier, Grenoble and at University of Zagreb
  
- 2017 – today: referee for Crystals
- 2017 – today: referee for Nature Communications
- 2015 - today: referee for Comptes Rendu de l'Academie des Sciences (France)
- 2012 - today: referee for the Physical Review Letters
- 2012 - today: referee for the Physical Review B
- 2009 – today: referee for the European Physical Journal E
- 2008 – today: referee for Carbon
- 2007 – : referee for Modern Physics Letters
- 1998 – : referee for the European Physical Journal B
- 1991 – : referee for Europhysics Letters and Journal de Physique

**ADDITIONAL INFORMATION AND NOTES****LECTURES/SEMINARS AT SCIENTIFIC INSTITUTIONS**

- 2018: "Role of frustration and disorder in the competition between antiferromagnetism and quantum spin liquid of organic charge-transfer Mott insulators", Laboratoire de Physique des Solides, Universite Paris-Sud, Orsay, France
- 2017: "Electronic Ferroelectricity in Two-Dimensional Molecular Solids: What is the origin of anomalous dielectric response in the organic Mott insulators with quantum spin liquid ground state", 1.Physikalisches Institut, Universität Stuttgart, Stuttgart, Germany
- 2015: "Electronic Ferroelectricity in Low-Dimensional Molecular Solids", Universite Pierre et Marie Curie, Paris, France

- 2014: "What is the origin of the anomalous dielectric response in layered organic crystals?", Institut za fiziku, Zagreb, Croatia
- 2012: "Complex and nonlinear dynamics of charge and spin structures in strongly correlated systems", Physikalisches Institut, Johann Wolfgang Goethe-Universitaet Frankfurt, Germany
- 2012: "Dynamics and Structure of Bioplyelectrolytes characterized by Dielectric Spectroscopy", Department of Physics, Catholic University of America
- 2009: "Structure and dynamics of Na-DNA aqueous solutions", Department of Physics, Faculty of Sciences, University of Zagreb, Croatia
- 2009: "Complex and non-linear dynamics of charge and spin structures", Institut za fiziku, Znanstveni skup povodom izbora Dr. Johna Coopera, dugogodišnjeg suradnika, za redovnog profesora Sveučilišta u Cambridgeu (Institute of Physics, Scientific meeting on the occasion of promotion of Prof. Dr. John Cooper at the Cambridge University)
- 2008: "Fundamental Length Scales and Screening in Biopolyelectrolytes", Physics Department, University of Ljubljana
- 2006: "Dielectric relaxation of DNA aqueous solutions", 1. Physikalisches Institut, Universität Stuttgart
- 2005: "Dielectric relaxation of DNA aqueous solutions", Laboratoire de Physique des Solides, Université Paris-Sud, Orsay, France
- 2005: "Electronic phases and charge dynamics in the spin ladder and chain system  $Sr_{14-x}Ca_xCu_{24}O_{41}$ ", Laboratoire de Physique des Solides, Université Paris-Sud, Orsay, France
- 2005: "Electronic phases and charge dynamics in the spin ladder and chain system  $Sr_{14-x}Ca_xCu_{24}O_{41}$ ", Laboratoire de Chimie Physique – Matière et Rayonnement, Université Pierre et Marie Curie, Paris, France
- 2004: "Charge-Density Wave State in Ladder Planes of  $Sr_{14-x}Ca_xCu_{24}O_{41}$ ", Université de Sherbrooke, Canada
- 2002: "Phason Low-Frequency Response in Charge/Spin Density Waves", 1. Physikalisches Institut, Universität Stuttgart,
- 2002: "Low-frequency Dielectric Spectroscopy in Low-Dimensional Systems", Department of Physics and Astronomy, University of Southern California, Los Angeles, USA
- 2002: "Low-frequency Dielectric Spectroscopy in Low-Dimensional Systems", Dept. of Physics, NHMFL, Florida State University, Tallahassee; University of Florida, Gainesville, USA
- 2002: "Low-frequency Dielectric Spectroscopy in Low-Dimensional Systems", National Institute of Health, LPSB, Bethesda, USA
- 2001: "Superconductivity and magnetism in organic layered superconductors", Department of Physics and Astronomy, University of Southern California, Los Angeles, USA
- 2001: "Superconductivity and magnetism in organic layered superconductors", Department of Physics, Boston College, Chestnut Hill and Department of Physics, Boston University, Boston, USA
- 2001: "Superconductivity and magnetism in organic anisotropic materials", Institute of physics, Zagreb, Croatia
- 2000: "Low-frequency Dielectric Spectroscopy in Low-Dimensional Systems", Institute of Physics, University of Basel, Basel, Switzerland
- 2000: "Low-frequency Dielectric Spectroscopy in Low-Dimensional Systems", Département de Physique, Ecole Polytechnique Federale de lausanne, Lausanne, Switzerland
- 1995: "Complex Low Frequency Dielectric Response of Spin-Density Wave in  $(TMTSF)_2PF_6$ ", Service National des Champs Magnetiques Pulsés, Toulouse, France
- 1995: "Charge and Spin Density Waves in Radical Ion Salts", 3. Physikalisches Institut, Universität Stuttgart, Stuttgart, Germany
- 1994: "Dynamics of Spin-Density Waves", Gakushuin University, Tokyo, Japan
- 1992: "Magnetic Field Influence on the Low and High Electric Field Transport in the Spin-Density Wave State of the Organic Conductor  $(TMTSF)_2NO_3$ : Imperfect Nesting Effects", Laboratoire de Physique des Solides, Université de Paris-Sud, Orsay, France

- 1992 : "Magnetic Field Influence on the Low and High Electric Field Transport in the Spin-Density Wave State of the Organic Conductor (TMTSF)<sub>2</sub>NO<sub>3</sub>: Imperfect Nesting Effects", CRTBT, Grenoble, France
- 1992: "Transport Properties of Organic Conductors and Superconductors" Ecole Polytechnique Federale de Lausanne, Switzerland
- 1992: "Normal Phase Electrical Transport and Superconductivity in Low-Dimensional Organic Conductors: Some New Results and Open Problems" Laboratoire de Physique des Solides, Université de Paris-Sud, Orsay, France
- 1991: "Organic Conductors: Physics of Reduced Dimensionality", Odense University, Denmark
- 1989: "Non-Ohmic Electrical Transport in the Spin-Density Wave State of the Organic Conductors (TMTSF) X", University of Hokkaido, Sapporo, Japan
- 1989: "Non-Ohmic Electrical Transport in the Spin-Density Wave State of the Organic Conductors (TMTSF) X", University of Kyoto, Kyoto, Japan
- 1989: "Non-Ohmic Electrical Transport in the Spin-Density Wave State of the Organic Conductors (TMTSF) X", Electrotechnical Laboratory, Tsukuba, Japan
- 1988: "Pressure-Temperature Phase Diagram of the Organic Conductors (DM-DCNQI)<sub>2</sub>X, X=Cu, Ag", University of Bayreuth, Germany
- 1988: "Non-Linear Conductivity in Charge and Spin Density Waves", University of Stuttgart, Germany
- 1986: "Effects of Non-Magnetic Disorder in Organic Superconductors", IBM Research Laboratory, San Jose, CA, USA
- 1986: "Effects of Non-Magnetic Disorder in Organic Superconductors", UCLA, Solid State Physics Department, CA, USA
- 1986: "Effects of Non-Magnetic Disorder in Organic Superconductors", Princeton University, USA

## INVITED TALKS AT INTERNATIONAL CONFERENCES AND SUMMER SCHOOLS

- "Role of frustration and disorder in the competition between antiferromagnetism and quantum spin liquid of organic charge-transfer Mott insulators", International Conference on Science and Technology of Synthetic Metals (ICSM 2018), Busan, Korea (2018).
- "The role of frustration and inherent disorder in the formation of quantum spin liquid: evidence from electronic properties of organic Mott insulators", International Research School and Workshop on Electronic Crystals, ECRYS2017, 21 August-2 September 2017, Cargese (France).
- "Electronic Ferroelectricity in Two-Dimensional Molecular Solids: Electronic Structure and Electrodynamic Response", Solid State Science and Research Meeting, 28-30 June 2017, Zagreb.
- "What is the origin of anomalous dielectric response in layered organic crystals? ", International Conference on Science and Technology of Synthetic Metals (ICSM 2014), Turku, Finland (2014).
- "Electrodynamics in Two-Dimensional BEDT-TTF Solids", International Symposium on Crystalline Organic Metals, Superconductors and Magnets (ISCOM2013), Montreal, Canada (2013).
- "Electrodynamics and Ferroelectricity in Two-Dimensional Molecular Solids", The German Physical Society (DPG) March Meeting, Regensburg, Germany (2013).
- "DNA in aqueous solutions with prevalent repulsive interactions: structure determined on the basis of dielectric spectroscopy measurements", Meeting on Bioinformatics and Biological Physics, Croatian Academy of Sciences and Arts, 21 November 2012, Zagreb.
- "Charge Dynamics in Quasi-2D Condensed Matter Systems with Strong Correlations", Colloquium "Jean-Paul Pouget days", 25-26 October 2012, Orsay, France.
- "Complex and nonlinear dynamics in the organic crystals with charge and magnetic orders", International Conference on Science and Technology of Synthetic Metals (ICSM 2012), Atlanta, Georgia, USA (July 2012).

- "Dynamics and Structure of Biopolymers in Aqueous Solutions: Collective and Single-Chain Properties", International Research School and Workshop on Electronic Crystals, ECRYS2011, 15-27 August 2011, Cargese (France).
- "Dynamics and structure of biopolyelectrolytes characterized by dielectric spectroscopy", 18th European Symposium on Polymer Spectroscopy, 19-22 September 2010, Zadar (Croatia).
- "Structure and Dynamics of Na-DNA Aqueous Solutions", The first meeting of EMBO conference series of Cell Biophysics, PhysCell2009, 6-13 September 2009, Primošten (Croatia).
- "Complex and nonlinear dynamics of charge and spin structures", XXIV International Conference of Physics Students, 10-18 August 2009, Split (Croatia).
- "Fundamental Length Scales and Screening in Dilute and Semidilute Na-DNA Aqueous Solutions", Regional Biophysics Conference 2009, Linz, Austria (2009).
- "Dielektrična relaksacija genomske deoksiribonukleinske kiseline" ("Dielectric relaxation of genomic DNA"), 4. znanstveni sastanak hrvatskih biofizičara (4<sup>th</sup> Scientific Meeting of Croatian Biophysicists), R.Bošković Institute, Zagreb (9 September 2005)
- "Charge-Density Wave State in Ladder Planes of  $Sr_{14-x}Ca_xCu_{24}O_{41}$ ", International Conference on Low Energy Electrodynamics in Solids (LEES'04), Kloster Banz, Germany (2004).
- «Dielectric spectroscopy of genomic DNA solutions», International Conference "From Solid State to Biophysics", Cavtat, Croatia (2004).
- «Suppression of the Charge-Density Wave State in  $Sr_{14}Cu_{24}O_{41}$  by Calcium Doping», March Meeting of American Physical Society, Montreal, Canada (2004).
- «Modalities of self-organized charge-response in low dimensional systems» International Conference "From Solid State to Biophysics", Cavtat, Croatia (2002).
- "Genuine superconducting ground state in  $\kappa$ -(BEDT-TTF) $_2$ Cu[N(CN) $_2$ ]Br: an understanding after decade of controversy", International Conference on Science and Technology of Synthetic Metals (ICSM 2002), Shanghai, China (2002).
- "Low-frequency dielectric spectroscopy of commensurate density waves", International Conference on Science and Technology of Synthetic Metals, ICSM'00, Bad-Gastein, Austria (2000).
- "Low-Frequency Dielectric Response of Charge-Density Wave Pinned by Commensurability in the Organic Conductor  $(2,5(OCH_3)_2DCNQI)_2Li$ ", International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, Sesimbra, Portugal (1997).
- "Complex Low Frequency Dielectric Response of the Incommensurate Spin-Density Wave Phase in the Bechgaard Salt  $(TMTSF)_2PF_6$ ", International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets, Mittelberg, Austria (1995).
- "Collective Charge Response in Incommensurate and Commensurate Spin-Density Waves", International Symposium on Novel Electronic States in Molecular Conductors, ISMC'94, Tokyo, Japan (1994).
- "Magnetic Field Influence on the Spin-Density Wave Phase of the Organic Conductor  $(TMTSF)_2NO_3$ ", International Workshop on Electronic Crystals ECRYS-93, Carry-Le-Rouet, France (1993).
- "Physical Properties of Novel Organic Alloys  $[(TMTSF)_{1-x}(TMTTF)_x]_2ReO_4$ " Gordon Research Conference on Organic Superconductors, Il Ciocco, Italy (1993).
- "Magnetic Field Influence on the Low and High Electric Field Transport in the Spin-Density Wave State of the Organic Conductor  $(TMTSF)_2NO_3$ ", International Conference on Science and Technology of Synthetic Metals, ICSM'92, Göteborg, Sweden (1992).
- "Influence of Disorder on Non-Linear Conductivity in SDW states of Bechgaard salts", Gordon Research Conference on Organic Superconductors, Irsee, Germany (1991).
- "Non-Ohmic Electrical Transport in the Spin-Density Wave State of the Organic Conductors  $(TMTSF)_2X$ ", International Conference on Science and Technology of Synthetic Metals, ICSM'90, Tübingen, Germany (1990).
- "Non-Ohmic Electrical Transport in the Spin-Density Wave State of Organic Conductors", Third European Conference on Low-Dimensional Conductors and Superconductors, Dubrovnik, Croatia (1989).

- "A Hidden Low-Temperature Phase in the Organic Conductor  $(\text{TMTSF})_2\text{ReO}_4$ " The First ISSP International Symposium on the Physics and Chemistry of Organic Superconductors, Tokyo, Japan (1989).
- "Non-Linear Electrical Transport Effects in the Spin-Density Wave State of the Organic Conductors  $(\text{TMTSF})_2\text{X}$ ", NATO Advanced Study Institute "Lower-Dimensional Systems and Molecular Electronics", Spetses, Greece (1989).
- "Pressure-Temperature Phase Diagram of the Organic Conductor  $(\text{DM-DCNQI})_2\text{Cu}$ ", International Conference on Science and Technology of Synthetic Metals, ICSM'88, Santa Fe, NM, USA (1988).
- "Spin-Density Wave in the Organic Conductor  $(\text{TMTSF})_2\text{NO}_3$ : Antiferromagnetic Critical Effects and Non-Linear Electrical Transport", International Conference on Science and Technology of Synthetic Metals, ICSM'88, Santa Fe, NM, USA (1988).
- "Antiferromagnetic Critical Effects and Non-Linear Conductivity in the Organic Conductor  $(\text{TMTSF})_2\text{NO}_3$ ", UCLA Spin-Density Wave Workshop, Los Angeles, USA (1988).
- "Effects of Non-Magnetic Disorder in Organic Superconductors", NATO Advanced Study Institute on Low-Dimensional Organic Conductors and Superconductors, Magog, Canada (1986).

## POPULAR LECTURES

- "Biological phenomena and physical concepts", Professional workshop for physics teachers, Institute of Physics, Zagreb (September 2009).
- "Biological phenomena and physical concepts", Summer school for young physicists, Mali Lošinj, (June 2009).
- "Density waves as self-organized structure: complementarity of collective and single-particle electrical conductivity channel"; Professional workshop for physics teachers, Institute of Physics, Zagreb (1999).

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## BRIEF DESCRIPTION OF MAJOR ACHIEVEMENTS AND CONTRIBUTIONS IN SCIENCE (citations and text are not updated since...)

Silvia Tomic is a Senior Research Advisor at the Institute of Physics in Zagreb. She studied physics at Faculty of Science, University of Zagreb and received her degree of *Docteur d'état es Sciences Physiques* at University Paris-Sud. Her research fields are condensed matter physics and biological physics. Her main research topics are collective electronic phases in strongly correlated materials with reduced dimensionality, as well as dynamics and structure of biopolyelectrolytes. Her major achievements and contributions in science are:

- 1) Sliding conductivity in spin density waves (SDW): the electric-field dependent response in SDW phase due to the sliding phason mode (4kF charge modulation) similar to that of the charge-density waves (CDW, 2kF charge modulation); in-depth characterization of transport properties (ST et al., PRL89, times cited: 115; JPhys1991, times cited: 74; PRB1990, times cited: 56; PRB91, times cited 27);
- 2) The decisive role of nonmagnetic disorder which reveals the nature of the unconventional superconductivity in organic systems. In quasi-1D systems, slow cooling rates allow for a structurally ordered low-temperature phase and formation of superconductivity (SC), in contrast fast cooling induces disorder, suppresses SC and promotes the competing SDW phase (ST et al, JPhysLett43, L-839,1982, times cited: 75, JPhys44, C3-1083,1983, times cited: 16; JPhys44, C3-1075,1983: 46); In 2D systems the SC order parameter is critically determined by the level of residual disorder: nominally pure slowly-cooled samples show behavior consistent with the d-wave SC, while increased residual disorder yields behavior expected for a d-wave SC with impurities or an s-wave SC (MP et al, PRB2000, times cited: 49, PRB2002, times cited: 29);
- 3) Bistable resistance, i.e. switching between two different conductance states (from metal to insulator and back) in an organic conductor with hybridized LUMO organic orbitals and d-orbitals of copper: in-depth characterization of the phase diagram revealed rather



destructive phase transitions associated with a change in the environment of the Cu cations which can be turned on and off by external (or internal) means like temperature and pressure (ST et al., JPhysC1988, times cited: 92, EPL1988, times cited: 32, SM1988, times cited: 38);

4) Anisotropic charge ordering within the ladder planes of the composite chain-ladder cuprate system SrCaCuO whose length scale is quickly reduced by Ca substitution, at high doping levels the CDW order fully vanishes due to increased dimensionality and disorder; construction of the phase diagram and in-depth analysis of competing electronic phases (BG et al., PRB2002, times cited: 36, TV et al., PRL2003, times cited: 47, PRB2003, times cited: 22; PRB2005, times cited: 16, PhysRep2006, times cited: 50).

5) Dynamics of biopolyelectrolytes in low ac electric fields by Dielectric spectroscopy which can detect and discern structural organization of the solution as an ensemble composed of many chains, as well as structural properties of a single chain (ST et al., PRL2006, times cited: 14, PRE2007, times cited: 24, EPL2008, times cited: 9, TV et al., PRE2010, times cited: 12, PRE2011, times cited: 4; ST et al., MS2011, ST et al., PhysicaB2012, times cited: 4; DG et al., PRE2013; ST et al., HAZU Proceedings2013).

6) Origin of the ferroelectric response in layered organic Mott insulators (MD et al, PRB(RC)2016, St et MD, RPP2015, MPPRB2014, STJPCM2013, KSetalPRB2013

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