

PERSONAL INFORMATION

Dragana Štrbac



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drstrbac Skype

Sex Female | Date of birth 18/05/1977. | Nationality Serbian

POSITION

Full Professor

WORK EXPERIENCE

Position	From	To
Full Professor	6.10.2021.	/
Associate Professor	4.10.2016.	6.10.2021.
Assistant Professor	07.10.2011.	4.10.2016.
Assistant with PhD	30.05.2011.	01.09.2011.
Assistant - Magister	20.06.2006.	01.05.2011.
Intern Assistant	01.01.2005.	01.06.2006.
Intern Assistant	01.04.2002.	01.12.2004.

PERSONAL SKILLS

Mother tongue(s) Serbian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
German	A1	A1	A1	A1	A1

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

**Communication skills** ▪ good presentation and communication skills gained through an experience as teaching Assistant, Assistant Professor and Associate Professor

**Job-related skills** Good experience in experimental measurements, especially in the field of surface analysis, gained through scientific work.

Experience in specific material synthesis and measuring techniques:

- Synthesis of bulk chalcogenide glasses (melt quench technique)
- UV/Vis/NIR Spectroscopy
- IIT
- DSC
- TG
- Dilatometry
- X-ray diffraction of powder samples
- Raman spectroscopy
- Mechanochemical synthesis of nanopowders

**Computer skills** ▪ good command of Microsoft Office™ tools  
▪ Corel Draw, Origin

**Driving licence** Driving licence category B

#### ADDITIONAL INFORMATION

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- Representative SCI Publications**
- Dragana Štrbac Christos A. Aggelopoulos, Goran Štrbac, Marinos Dimitropoulos, Mladenka Novaković, Tamara Ivetić, Spyros N. Yannopoulos, Photocatalytic degradation of Naproxen and methylene blue: Comparison between ZnO, TiO<sub>2</sub> and their mixture, , Process Safety and Environmental Protection 113 ( 2018 ) 174–183
- D.D. Štrbac, S.R. Lukić-Petrović, D.M. Petrović , G. R. Štrbac, A. S. Tveryanovich, Effect of Cu Variation on the Optical and Structural Properties of Thermally Deposited Cu - AsSe<sub>1.4</sub> I<sub>0.2</sub> Thin Films, Chalcogenide Letters, 12(2):75, 2015.
- D.D. Štrbac, S.R. Lukić-Petrović, D.M. Petrović, I.R. Videnović, M. Dramićanin, Influence of Copper on Hardness of Amorphous As-Se-I Thin Films, Materials Science and Technology, 30 (2), 2014., doi 10.1179/1743284713Y.0000000346
- S. R. Lukić-Petrović, M. D. Vučkovic, G. R. Štrbac, D. D. Štrbac, Study of Glass Transition Process in Quasi-Binary As<sub>2</sub>S<sub>3</sub>-CdS Chalcogenides, Journal of Non Crystalline Solids, 377, 2013., DOI: 10.1016/j.jnoncrysol.2013.01.020
- G. Štrbac, S. Lukic-Petrovic, D. Štrbac, K. Cajko, I.I. Turyanytsa, Influence of the Introduction of Copper into Amorphous As<sub>2</sub>Se<sub>3</sub> Matrix on its Thermal and Structural Characteristics, Acta Physica Polonica A, 2 (123) 2013.
- G. R. Štrbac, S. R. Lukić-Petrović, D. D. Štrbac, D. M. Petrović, Effect of Arsenic Atom Substitute With Antimony on Crystallization Processes and Thermal Stability of the (Sb, As)-S-I System, Journal of Non Crystalline Solids, 358(8), 2012.
- D. D. Štrbac, S. Lukić, D. Petrović , J. M. Gonzalez-Leal, A. Srinivasan , G. Štrbac, Influence of substrate absorption on accuracy of determination of refractive index and thickness of uniform thin chalcogenide Cu<sub>1</sub>[As<sub>2</sub>(S<sub>0.5</sub>Se<sub>0.5</sub>)<sub>3</sub>]<sub>0.99</sub> film, Thin Solid Films, 518, 2010.
- D. D. Štrbac, S. Lukić, D. Petrović, J. M. Gonzalez-Leal, A. Srinivasan, Single oscillator energy and dispersion energy of uniform thin chalcogenide films from Cu-As-S-Se, System, Journal of Non-Crystalline Solids, 353, 2007.
- A.F. Kozmidis-Petrovic, G.R. Štrbac, D.D. Štrbac, Kinetics of non-isothermal crystallization of chalcogenide glasses from Sb<sub>32</sub>As<sub>5</sub>S<sub>48</sub>I<sub>15</sub> system, Journal of Non-Crystalline Solids, 353, 2007.

F. Petrović, S.R. Lukić, D.D.Štrbac, Critical rate of cooling glassy melts under conditions of continuous nucleation. The application to some chalcogenide glasses, *Journal of Optoelectronics and Advanced Materials*, 4, 2004.

S. R. Lukić, D. M. Petrović, D. D. Štrbac, V. B. Petrović, F. Skuban, Dependence of thermal stability and thermomechanical characteristics of non-crystalline chalcogenides in the Cu-As-Se system on copper content, *Journal of Thermal Analysis and Calorimetry*, 82, 2005.

S. R. Lukić, D. M. Petrović, G. R. Štrbac, D. D. Štrbac, Chalcogenide films on glass substrate as attenuators of X-ray radiation, *Zeitschrift für Kristallographie*, 23, 2006

#### Representative Presentations at Conferences

M. Novakovic, D. Strbac, T. Ivetic, G. Strbac, M. Djogo, B. Obrovski, M. Vojinovic Miloradov, Photocatalytic decomposition of diclofenac sodium in aqueous solution by nanopowder mixture ZnO/TiO<sub>2</sub>, SETAC EUROPE, Brussels, Belgium, from 7–11 May 2017.

Bezanovic Veselin, Sremacki Maja, Štrbac Dragana, Đogo Maja, Mihajlovic Ivana, Identification of organic pollutants in leachate of MSW landfill sites in AP Vojvodina, Serbia, 9th IWA YWP Budapest 2017., M33

Tamara Ivetić, Nina Finčur, Biljana Abramović, Ljubica Đaćanin Far, Svetlana Lukić-Petrović, Activity evolution of nanocrystalline zinc-indium-oxide powder, 23rd International Symposium on Analytical and Environmental Problems, Szeged 2017

D. Štrbac, G. Štrbac, G. Stojanović, S. Lukić-Petrović, D. Petrović, Modification of some Optical and Mechanical Properties of Amorphous As-S-Se Thin Films by Copper Introduction, *Material Science and Engineering Technology II*, 2014.

K. Čajko, S. Lukic-Petrovic, D. Strbac, T. Wagner, J. Prikryl, Absorption edge and optical band gap of Ag-As<sub>40</sub>S<sub>30</sub>Se<sub>30</sub> amorphous samples, 4th International Advances in Applied Physics and Materials Science Congress & Exhibition, 2014.

V. Mihajlovic, Z. Miroslavljevic, D. Strbac, D. Ubavin, Possibility of implementation of Waste-to-Energy technology in the city of Novi Sad, Conference Engineering of Environment Protection - TOP 2014.

Z. Miroslavljevic, V. Mihajlovic, D. Strbac, N. Stanisavljevic, Management of Glass Containers in Serbia: Current Status and Perspectives, PSU-UNS International Conference on Engineering and Technology - ICET, 2013.

S. Lukić-Petrović, D. Štrbac, G. Stojanović, D. Petrović, Measurements of the Hall Effect on Cu-As-Se-I Amorphous Thin Films, ICSFS, 2012.

D. Štrbac, S. Lukić-Petrović, D. Petrović, M. Dramićanin, Some Typical Problems in Characterization of Amorphous Chalcogenide Coatings, ICSFS, 2012.

S. Lukić-Petrović, M. Vučkovic, G. Štrbac, D. Štrbac, Influence of Introduction of CdS in As<sub>2</sub>S<sub>3</sub> Glass on Some Thermal Properties, ISNOG, 2012.

G. Štrbac, D. Štrbac, K. Čajko, S. Lukić-Petrović, S. The influence of Introduction of Copper into Amorphous Matrix As<sub>2</sub>Se<sub>3</sub> on Thermal and Structural Characteristics, APMAS, 2012.

D. Štrbac; S. Lukić-Petrović; D. Petrović; M. Dramićanin; I. Videnović; Instrumented Indentation Testing of Cu-As-Se-I Thin Amorphous Films, European Material Research Society-Spring Meeting, 2011.

M. Šiljegović; S. Lukić-Petrović; D. Štrbac; Analysis of Some Optical Parameters of Glasses of the Bix(As<sub>2</sub>S<sub>3</sub>)<sub>100-x</sub> system, International Conference on Optical, Optoelectronic and Photonic Materials and Applications; 2010.

D. Štrbac; S. Lukić-Petrović; D. Petrović; A. S. Tveryanovich; G. Štrbac; Optical and Structural Properties of Amorphous Chalcogenide Thin Films in the Cu-As-Se-I System NANOSMAT; 2010.

V. Petrović; D. Štrbac; I. Gut; S. Lukić-Petrović; Optical properties of Er-doped As-S-Ge chalcogenide glasses, International Conference on Amorphous and Nanostructured Chalcogenides; 2009.

D. Đaković; M. Dimić; M. Spasojević; D. Štrbac; Possibility of Exergy Analysis Application on Drying Process, International Conference on Engineering Technologies - ICET 4; 2009.

G. Štrbac; I. Gut; D. Štrbac; Lj. Đačanin; Optical Characteristics of the Chalcogenide Sb<sub>32</sub>As<sub>51</sub>15 Glass, 10th International Symposium TECHNOMAT & INFOTEL Materials, Methods and Technology, 2008.

G. Štrbac; D. Petrović; D. Štrbac; S. Lukić-Petrović; I. Gut; Effect of Arsenic Atom Substitute with Antimony on Optical Properties of Amorphous Chalcogenides from the System Sb(As)-S-I, The 15th International Conference on Luminescence and Optical Spectroscopy of Condensed Matter, 2008.

D. Štrbac, S. Lukić, D. Petrović, J. M. Gonzalez-Leal, A. Srinivasan; Influence of Substrate Absorption on Accuracy of Determination of Refraction Index and Thickness of Uniform Thin Chalcogenide Film from Cu<sub>1</sub>[As<sub>2</sub>(S<sub>0.5</sub>Se<sub>0.5</sub>)<sub>3</sub>]<sub>99</sub> System, Materials Today Asia, 2007.

D.D. Štrbac, S.R. Lukić, D.M. Petrović, J.M. Gonzalez-Leal, A. Srinivassan, Single oscillator energy and dispersion energy of uniform thin films from Cu-As-S-Se system, International Symposium On Non Oxide And Optical Glasses - ISNOG 2006.

Đ. Bašić, D. Filipović, D. Štrbac, D. Đaković, Exploitation of Geothermal Potentials in Serbia for Production of Heat Energy-Present State and Strategies, The First International Conference'06-Challenges of Transition, 2006.

A. F. Kozmidis-Petrović, G. R. Štrbac, D. D. Štrbac, Non-Isothermal Crystallization Kinetics Study on New Chalcogenide Glasses from Sb<sub>x</sub>As<sub>37-x</sub>S<sub>48</sub>I<sub>15</sub> System and Analysis of Possibility of Applying the Augis and Bennett Method, 10th International Conference on the Structure of Non-Crystalline Materials, 2006.

G. Štrbac; F. Skuban; S. Lukić-Petrović; D. Štrbac; Influence of Antimony on Thermal Stability of Bulk Chalcogenides from Sb<sub>x</sub>As<sub>37-x</sub>S<sub>48</sub>I<sub>15</sub> System, 5th Romanian Conference on Advanced Materials, 2006.

B. Nakomčić Smaragdakis; D. Štrbac; J. Petrović; Đ. Bašić; Geothermal Energy Sources in Serbia and Utilization of Hydrothermal Energy in Vojvodina, The Joint Workshop of Geothermal and Biomass Energy Sources for Countries Along the Danube, 2006.

S. Lukić-Petrović; G. Štrbac; D. Štrbac; M. Šiljegović; DSC Measurements as a Base for Determination of Characteristic Enthalpies of Glasses from Cu-As-S-Se System, Third Balkan Conference on Glass Science and Tehnology, 2005.

G. Štrbac, D. Štrbac, S. Lukić, Z. Cvejić, M. Šiljegović; Analysis of Characteristic Temperatures of Cu-As-S-Se Glasses by Differential Scanning Calorimetry, 8th International Symposium on Interdisciplinary Regional Research Hungary-Romania-Serbia and Montenegro, ISIRR 8, 2005.

D. Đaković; D. Štrbac; S. Đaković; G. Dragutinović; M. Dimić; Possible Applications of Geothermal Energy in Serbia, International Symposium "Young People and Multidisciplinary Research, 2004.

S. Lukić-Petrović; D. Petrović; G. Štrbac; D. Štrbac; Chalcogenide Films as Attenuars of X-Ray Radiation on Glassy Coats, EPDIC 9, 2004.

V. B. Petrović, S.R. Lukić, F. Skuban, D. D. Štrbac; Thermal coefficient of linear expansion of non-crystalline chalcogenides in the Cu-As-Se system, YUCOMAT, 2004.

G. Štrbac; D. Štrbac; S. Lukić-Petrović; Dissolutin rate of glassy chalcohalides from the system Ge-As-(S, Se)-I, Int.Symp. Interdisciplinary Regional Research, Hungary-Romania-Yugoslavia "Interdisciplinary Regional Research", 2002.

**Other Publications** G. Štrbac; S. Lukić-Petrović; I. Gut; D. Štrbac; S. Yannopoulos; Chemical stability of glassy Sb<sub>x</sub>-As<sub>37-x</sub>S<sub>48</sub>I<sub>15</sub> chalcohalides, Journal of Research in Physics, 2010.

M. Šiljegović; S. Lukić-Petrović; Lj. Đačanin; D. Štrbac ; Calculation of Single-layer and Multilayer Chalcogenide Refractive Index Using Cheremukhins Method, Journal of Research in Physics, 2009.

D. Štrbac; S. Lukić-Petrović; D. Petrović; G. Štrbac; J. M. Gonzalez-Leal; A.. Srinivasan; Study of the Composition Homogeneity of amorphous Thin Films from the System Cu-As-S-Se by Scanning Electron Microscopy, Journal of Research in Physics, 2007.

**Monograph Publication** Bašić Đorđe; Petrović Jovan; Marić Mića; Dragutinović Gordan; Gvozdenac Urošević Branka; Štrbac Dragana: Possibility of utilisation of geothermal water in Vojvodina (in Serbian), ISBN 978-86-815-0341-5, 2009.

**Doctor Thesis** Characterization of metal-chalcogenides films from Cu - AsSeylz system (in Serbian), 2011.

**Master Thesis** Optical characteristics important for application of amorphous thin films from Cu-As-S-Se system (in Serbian), 2006.

**BSc Thesis** Characteristics of photo recording on the thin HSP films with copper (in Serbian), 2001.

**Projects** Project leader of a short-term project, "The use of glass containers from landfill in Novi Sad as secondary raw material for the production of bricks" July 2014. – Jun 2015.

Project leader of a long term project "Synthesis and application of new nanostructured materials for the degradation of organic pollutants from municipal landfill leachate in Vojvodina"2016.-2020.

#### Participant

SENVIBE, Erasmus + project  
MINEA, COST project

"Amorphous and nanostructured chalcogenides" 2006.-2010.,

"Technology, obtaining and characterization of disordered semiconductors" 2005.,

"Amorphous and nanostructured chalcogenides and ceramics" 2003.-2005.,

"Chemical derivatisation of fuleren C60 and biological investigation" 2002.-2003.

Correlation between composition and properties of metal-doped noncrystalline chalcogenides. 2011-today

Physics of amorphous and nanostructural materials; 2011.-today

Materials of reduced dimensionality for efficient absorption of light and conversion of energy. 2011-today

Study of geothermal energy potentials and possibility of electricity and heat, NPEE registration number EE706-1026A , 2004.

Analysis of the low geothermal potentials and the possibility of electricity and cooling energy, NPEE registration number EE-273018B, 2005.

Project of Identifying and Classifying Wild Dump Sites, Assessment of Necessary Financial Resources for their Remediation at the Territory of the Autonomous Province of Vojvodina, 12.2007 – 08.2008

Illegal municipal solid waste dump sites risk assessment as necessary parameter for spatial and urban planning on territory of AP Vojvodina, 2009.

Establishing the Composition and Quantities of Wastes at the Territory of the Autonomous Province of Vojvodina, 12.2007 – 08.2008

Strategic Environment assessment for south part of Pancevo including Oil refinery Pancevo, petrochemical company Pancevo and fertilizers company Pancevo, 06.2004.-11.2005.

Optimization of hazardous and non-hazardous waste management system in Elektrovojvodina using MFA-Material Flow Analysis, 2010-2011.

Project of Identifying Waste Composition and Evaluation of Quantities with an Aim to Define the Strategy for Secondary Raw Materials Management within the Sustainable Growth of the Republic of Serbia, 2008-2009.

Identification of illegal dump sites of municipal solid waste on territory of Republic of Serbia, 2008-2009.

**Honours and awards** Awarded as top ranked Assistant by student evaluation (2008.)

Awarded as top ranked Professor by student evaluation (2013.)

**Memberships** Serbian Association of Physicists

International Commission on Glass (ICG)