

## **Prof. Dr. Urška LAVRENCIČ ŠTANGAR**

Head of Laboratory

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### **EDUCATION**

#### **Education and Professional Qualifications**

1990 B.Sc. Chemistry, University of Ljubljana

1993 M.Sc. Chemistry, University of Ljubljana

1996 Ph.D. Chemistry, University of Ljubljana

Thesis: The Investigation of Optical, Structural and Intercalation Properties of Thin Films for Electrochromic Devices (supervisor prof. dr. Boris Orel)

2002 Habilitation to Assistant Professor for Inorganic Chemistry (University of Nova Gorica)

2008 Habilitation to Associate Professor for Chemistry (University of Nova Gorica)

#### **Academic Awards/Research Grants**

2001 Marie Curie (MCFI-2001-00183) and Lise Meitner postdoctoral research grants, project "Chiral molecular imprinting in mesoporous silica films" at Vienna University of Technology, 18 months

2006 National Zois recognition for important achievements in science and research

2007 The Slovenian Science Foundation award for promotion of science

2008 Local award (Primorske novice and Radio Koper) for transfer of knowledge

### **EMPLOYMENT**

1990-2004 National Institute of Chemistry, Laboratory for Spectroscopy of Materials  
young researcher (1990-1996),  
research assistant (1997-2001),  
research associate (2001-2004)

2001-2003 Vienna University of Technology, Institute of Materials Chemistry  
Austrian *Lise Meitner* (2001-2002) and EU *Marie Curie* (2002-2003) financing

2004-2005 Environmental Agency of the Republic of Slovenia

2001- present University of Nova Gorica

Laboratory for Epitaxy and Nanostructures, part-time employment (2001-2005)

Laboratory for Environmental Research, full-time employment since Feb 2005

#### **Principal investigator of research projects:**

1998-2001 basic project "Inorganic-organic sol-gel hybrids with photochromic and ionic properties" (J1-0661)

2000-2003 applied project "Optically selective coatings for automotive lamps" (L2-2256-0104)

2001-2004 basic research project "Sol-gel synthesis and characterization of nanostructured materials" (J1-3463-0104-01)

2005-2008 applied project „Self-cleaning and photocatalytic coatings for environmental applications“ (L1-7150-1540)

2006-2008 applied project „Self-cleaning photocatalytic paints and coatings“ (M2-0106)

2008-2010 applied project „Development of photocatalytic coatings and gas-phase reactors for determination of coatings efficiency in air- and self-cleaning“ (L2-1129-1540-08)

1996-1998 Slovene-French project PROTEUS (Hybrid organic-inorganic nanomaterials with iono-electronic properties) with Dr. P. Judeinstein, Univ. de Paris-Sud, CNRS, Orsay

1999-2001 Slovene-French project PROTEUS (In-situ vibrational spectroscopic measurements of gasochromic and electrochromic films) with Dr. Ph. Colomban, Heterogeneous Solids and Nanophases, LADIR UMR 7075 CNRS & Paris VI University, Thiais

2005-2008 Slovene-Italian project "Mesoporous titania-based films as photocatalysts for pesticides degradation" with Dr. S. Gross, CNR-ISTM, University of Padova

- 2007-2008 Slovene-Austrian project “Sol-gel produced TiO<sub>2</sub> and SiO<sub>2</sub>-TiO<sub>2</sub> for self-cleaning and photocatalytic coatings” with Prof. Dr. U. Schubert, Institute of Materials Chemistry, Vienna University of Technology
- 2008-2009 Slovene-Czech project “Photoinduced properties of multicomponent and multilayer TiO<sub>2</sub>/SiO<sub>2</sub> coatings” with Prof. Dr. J. Krysa, Institute of Chemical Technology, Prague
- 2004-2006 experimental projects – neutron scattering (Laboratoire Leon Brillouin, CEA-Saclay, France) “Proton conductivity in organic-inorganic nanocomposite polymer membranes” (LLB-7463 and LLB-7898, RII3-CT-2003-505925)
- 2006-2008 mobility project Leonardo da Vinci “Development of materials for environmental applications” (SI/6/A/F/EX/176113)

**Published work:** >60 articles, 2 book chapters and 3 patents

**Pedagogical activities:**

- 1999-2001 assistant for inorganic chemistry, University of Ljubljana, Faculty for Chemistry and Chemical Technology
- 2001-2003 on a visit at Vienna University of Technology (Institute of Materials Chemistry) with research project and pedagogical activities
- 2002- lectures at University of Nova Gorica
- undergraduate subjects: Chemistry, Chemical Properties of Materials, Friendly Technologies to the Environment
  - graduate subjects : Chemistry, Modern Trends in Environmental Science (seminar mode)
- 2008- visiting professor at University of Padova (*Scuola di dottorato in scienze molecolari*) with subject “Processes and materials for the exploitation of sustainable energy” at graduate study programme
- 2005-2009 coordinator for student exchange Socrates/Erasmus at the School of Environmental Sciences, University of Nova Gorica
- 2006- mentorship to undergraduate and graduate students

**Work in expert commissions:**

- management committee of COST action 540 (»Photocatalytic Technologies and Novel Nanosurfaces Materials – Critical Issues«, PHONASUM)
- scientific international committee of the conference »European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications« (SPEA5, SPEA6)
- scientific committee of international symposium “Spectroscopy in Theory and Practice”
- programme committee of national conference “Materials and Technologies for Sustainable Development”
- executing committee of the national technologic platform Advanced Materials (NaMat)