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Education

- 1993 – 1998 Comenius University, Faculty of Mathematics, Physics and Informatics, Bratislava, Slovakia | **MSc.** in experimental physics - optics and optoelectronics
- 5-11/1997 Shizuoka University, Research Institute of Electronics, Hamamatsu, Japan | **exchange student program**
- 1998 – 2002 University of Bielefeld, Bielefeld, Germany | **Dr. Rer. Nat.** (summa cum laude) in Molecular and Surface Physics
- 2021 **DSc. (Research professor)**, Slovak Academy of Sciences, Bratislava, Slovakia

Employment

- 2002 - 2005 University of Bielefeld, Bielefeld, Germany | **PostDoc**
- 2005 - present Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia | **Researcher** in the Department of Multilayers and Nanostructures
- 2010 - present Comenius University, Faculty of Mathematics, Physics and Informatics, Bratislava, Slovakia | **External lecturer** in undergraduate and graduate courses
- 2017 - present Centre of Excellence for Advanced Materials Application (CEMEA), Slovak Academy of Sciences, Bratislava, Slovakia | **Core researcher**

Prizes and awards

- 1995,1996,1997 Laureate of student scientific conference, Bratislava, Slovakia
- 1997 AIEJ short-term scholarship, Association of International Exchange, Tokyo, Japan
- 2002 PhD prize of Westphalian-Lippe University Society, Westphalian-Lippe University Society, Bielefeld, Germany
- 2011 Prize of the Minister of Education, Science, Research and Sport of Slovak Republic, Bratislava, Slovakia
- 2013 team member of *Top Research Teams* in Slovak Republic, Bratislava, Slovakia
- 2021 elected member of the **Learned Society of Slovakia**

PhD Supervisor 11 students

Projects: 2x EU Horizon, 2x ERA-NET, 3x ERDF, 3x APVV, 1x VEGA, 1x SAIA

Selected publications (10 from the last 5 years)

1. V. Held, N. Mrkyvkova, Y. Halahovets, P. Nádaždy, K. Vegso, A. Vlk, M. Ledinský, M. Jergel, S. Bernstorff, J. Keckes, F. Schreiber, and **P. Siffalovic**, *ACS Appl Mater Interfaces* **16**, 35723–35731 (2024).
2. S. Mičky, E. Šimon, J. Todt, K. Végső, P. Nádaždy, P. Krížik, E. Majková, J. Keckes, Ju Li, and **P. Siffalovic**, *Small* **20**, 2307837 (2024).
3. Q. Guesnay, F. Sahli, K. Artuk, D. Turkay, A. G Kuba, N. Mrkyvkova, K. Vegso, **P. Siffalovic**, F. Schreiber, H. Lai, F. Fu, M. Ledinský, N. Fürst, A. Schafflützel, C. Bucher, Q. Jeangros, C.e Ballif, and Ch. M Wolff, *Adv Energy Mater* **14**, 2303423 (2024)
4. B. Lu, K. Vegso, S. Micky, C. Ritz, M. Bodik, Y.M. Fedoryshyn, **P. Siffalovic**, and A. Stemmer, *ACS Nano* **17**, 12774–12787 (2023).
5. T. Wang, D. Zheng, K. Vegso, N. Mrkyvkova, **P. Siffalovic**, and T. Pauporte, *Adv Funct Mater*, 2304659 (2022).
6. M. De Bastiani, R. Jalmood, J. Liu, C. Ossig, A. Vlk, K. Vegso, M. Babics, F.H. Isikgor, A.S. Selvin, R. Azmi, E. Ugur, S. Banerjee, A.J. Mirabelli, E. Aydin, T.G. Allen, A. Ur Rehman, E. Van Kerschaver, **P. Siffalovic**, M.E. Stuckelberger, M. Ledinsky, and S. De Wolf, *Adv Funct Mater*, 2205557 (2022).
7. N. Mrkyvkova, V. Held, P. Nádaždy, R. Subair, E. Majkova, M. Jergel, A. Vlk, M. Ledinsky, M. Kotlár, J. Tian, and **P. Siffalovic**, *J Phys Chem Lett* **12**(41), 10156–10162 (2021).
8. A. Shaji, K. Vegso, M. Sojkova, M. Hulman, P. Nadazdy, Y. Halahovets, L. Pribusova Slusna, T. Vojtekova, J. Hrda, M. Jergel, E. Majkova, J. Wiesmann, and **P. Siffalovic**, *Appl Surf Sci* **606**, 154772 (2022).
9. M.A. Ashraf, K. Vegso, A. Shaji, M. Bodik, M.G. Sánchez, M. Zubair, M.F.U. Din, E. Majkova, A.S. Fedorková, J. Keckes, and **P. Siffalovic**, *ACS Appl Energy Mater* **5**(12), 15649–15655 (2022).
10. F. Huang, M. Li, **P. Siffalovic**, G. Cao, and J. Tian, *Energy Environ Sci* **12**(2), 518–549 (2019).

Monographies

1. **P. Siffalovic**, M. Jergel, E. Majkova, *GISAXS - probe of buried interfaces in multilayered thin films*, in: C.M. Bauwens (Ed.) *X-Ray Scattering*, Nova Science Publishers, New York, 2011.
2. **P. Siffalovic**, E. Majkova, M. Jergel, K. Vegso, M. Weis, S. Luby, *Self-assembly of nanoparticles at solid and liquid surfaces*, in: A. Hashim (Ed.) *Smart Nanoparticles Technology*, INTECH, Rijeka, 2012.
3. D. Korytar, P. Vagovic, C. Ferrari, **P. Siffalovic**, *X-Ray Crystal Optics Based on Germanium Single Crystals*, in: E.E. Feuerstein (Ed.) *Germanium: Characteristics, Sources and Applications*, Nova Science Publishers, New York, 2013.
4. S. Luby, M. Lubyova, **P. Siffalovic**, M. Jergel, E. Majkova, *A Brief History of Nanoscience and Foresight in Nanotechnology*, in: M. Bardosova, T. Wagner (Eds.) *Nanomaterials and Nanoarchitectures: A Complex Review of Current Hot Topics and their Applications*, Springer Netherlands, Dordrecht, 2015.
5. **P. Siffalovic**, K. Vegso, M. Hodas, M. Jergel, Y. Halahovets, M. Pelletta, D. Korytar, Z. Zaprazny, E. Majkova, *In Situ X-Ray Reciprocal Space Mapping for Characterization of Nanomaterials*, in: Challa S.S.R. Kumar (Ed.) *X-ray and Neutron Techniques for Nanomaterials Characterization*, Springer, Berlin, 2016.
6. M Bodik, **P. Siffalovic**, *Langmuir films—a universal method for fabricating organized monolayers from nanomaterials*, in: K. Ariga and O. Azzaroni (Eds.) *Materials Nanoarchitectonics - From Integrated Molecular Systems to Advanced Devices*, Elsevier, 2023.

List of the 5 recent most relevant projects:

- [OPERA](#), HORIZON-RIA / EU, 2023-2026, PI for the Slovak partner.
- [SEATBELT](#), HORIZON-RIA / EU, 2023-2026, PI for the Slovak partner
- SOLIMEC, M-ERA.NET / EU, 2021-2025, PI for the Slovak partner
- CERANODE, M-ERA.NET / EU, 2024-2027, PI for the Slovak partner
- BATAX, APVV / SK, 2022 – 2025, PI

Pedagogical activity

- Semester lecture for Master's degree, *Analysis of surfaces and thin films using Electromagnetic Radiation*, FMFI, **Comenius University** in Bratislava
- Semester lecture for doctoral studies, Physics of ultrafast processes, FMFI, **Comenius University** in Bratislava
- Special Practical Course for Master's Degree, FMFI, **Comenius University** in Bratislava
- Practical exercises within the course Nanotechnology, FEI, **Slovak Technical University** in Bratislava

Membership in scientific and professional commissions and committees

- since 2009, Member of the Joint Doctoral Committee in the field 4.1.4 Quantum Electronics and Optics, FMFI, **Comenius University** in Bratislava
- since 2016, Member of the Executive Committee of the International Union For Vacuum Science, Technique and Applications (IUVSTA) for Slovakia

Scientometrics

Publications registered in Web of Science: 175 publications with 2,100 citations (h=22). (07/2024)

Number of monographs: 6

Invited lectures: 16

Number of patents: 2

Other: more than 100 papers at international and national conferences

R&D with industrial partners

- Development of laser scatterometer for R&D of solar cells, **Schüco International KG (Germany)**
- Development of Ge channel-cut X-ray monochromators for company **Integra TDS s.r.o (Slovakia)**
- Design and fabrication of advanced X-ray mirrors for **Free-Electron Laser in Hamburg (Germany)** and collaboration on this topic with the company **Incoatec GmbH, Geesthacht (Germany)**
- Design and fabrication of scatter-free X-ray pinholes for the following companies and institutions: **Rigaku Ltd. (USA), Anton Paar (Austria), Synchrotron in Sinchu (Taiwan), University in Leoben and Vienna University (Austria)**
- Research and development of LED luminaries for company **OMS s.r.o. (Slovakia)**

Patents

- Preparation of nanoparticle mono- and multi-layers by modified Langmuir-Blodgett method, L. Chitu, **P. Siffalovic**, E. Majkova, S. Luby, registration number 288234
- Method of preparation of branched polymer butylacrylate nanoparticles, I. Capek, M. Majkova, K. Gmucova, **P. Siffalovic**, PP 5001-2010