

Doc. Ing. Václav Prajzler Ph.D.

Born in Prague, Czech Republic in 1976, married, 2 children

EDUCATION

2014-now Associate Professor at the Department of Microelectronics of FEE, CTU in Prague

2020-now Head of Optoelectronics Group at the Department of Microelectronics

2007-2014 Researcher at the Department of Microelectronics of FEE, CTU in Prague

2007 Dr. techn. (Ph.D.) degree in Czech Technical University in Prague, Czech Republic

2001 Dipl.-Ing. (MSc) degree in Czech Technical University in Prague, Czech Republic

Languages: Czech, English, passively: German

PROFESSIONAL EXPERIENCE

2020 (3 month) visiting researcher at the PROFACTOR GmbH A-4407 Steyr-Gleink, Austria

2021 (3 months) visiting researcher at the PROFACTOR GmbH A-4407 Steyr-Gleink, Austria

PROJECTS

2023 – 2025, TK05020031, Technologická agentura ČR – Development of optical cables for use in special applications and in extreme conditions. (Investigator)

2023 - 2025, TK0502003, Technologická agentura ČR - New advanced integrated fiber optic connectors for demanding applications. (Co-investigator)

2023 - 2025, FW06010161, Technologická agentura ČR - Fiber optic elements with new standards for optical connectors for safety-intensive applications. (Co-investigator)

2023 - 2025, FW06010382, Technologická agentura ČR - Advanced nano-optical elements on rigid planar and curved substrates for next-generation lighting systems. (Co-investigator)

2019 – 2021, TH04020118, Technologická agentura ČR – Optical planar channel polymer waveguides for high-capacity and high-speed data transmission. (Investigator)

2019 – 2021, TH04020195, Technologická agentura ČR – Micro and nanostructured waveguides for controlled distribution of light. (Co-investigator)

2020 – 2022, SGS20/175/OHK3/3T/13, ČVUT – Integrated and Phonic Circuits and Microstructures (IFOM). (a member of the research team)

2017 – 2019, SGS17/188/OHK3/3T/13, ČVUT – Micro and nanostructures and components. (a member of the research team)

2015 – 2018, TH01020276, Technologická agentura ČR – Flexible 2D & 3D polymer photonics structures. (Investigator)

CURRENT RESEARCH INTERESTS:

- Integrated Optics
- Planar optical waveguides, polymer optics waveguides
- Optical fibers and cables for harsh environments

Collaborations:

National Taiwan University of Science and Technology - prof. Wei-Nien Su, prof. San-Liang Lee

Yonsei University, South Korea - prof. Kyunghwan (Ken) Oh, Ph.D.

Ajou University, South Korea - prof. Kim, Sunghwan

PROFACTOR GmbH - DI Daniel Fechtig, Ph.D., Dr. Michael Mühlberger

OPTOKON, a.s.; OPTOKON Kable Co., Ltd., s.r.o. – ing. Jiří Štefl

IQS NANOPTIQS s.r.o. – ing. Marek Škereň Ph.D.

PUBLICATIONS

more than 100 published scientific and technical papers in WOS.

H-index: WOS: 15

- PRAJZLER, V. a M. ZIKMUND. Power over fiber using a multimode optical power with a core diameter of 50 μm . *Optical and Quantum Electronics*. 2024, 56(8), 1-18. ISSN 1572-817X. DOI 10.1007/s11082-024-07231-8.
- PRAJZLER, V. et al. Experimental measurements of gamma-radiation effects on fiber-optic cables. *OPTICAL FIBER TECHNOLOGY*. 2024, 84 ISSN 1068-5200. DOI 10.1016/j.yofte.2024.103765.
- PRAJZLER, V. et al. Polydimethylsiloxane multimode optical channel waveguides doped with yellow dye fabricated by microdispensing. *Journal of Materials Science: Materials in Electronics*. 2023, 34(27), ISSN 0957-4522. DOI 10.1007/s10854-023-11324-7.
- MARTINEK, P. a V. PRAJZLER. Power over fiber using a large core fiber and laser operating at 976 nm with 10 W power. *OPTICAL FIBER TECHNOLOGY*. 2023, 80 ISSN 1068-5200. DOI 10.1016/j.yofte.2023.103404.
- PRAJZLER, V. et al. Inorganic-organic hybrid polymer multimode optical channel waveguides. *Microsystem Technologies*. 2023, 29 1769-1781. ISSN 0946-7076. DOI 10.1007/s00542-023-05567-x.
- PRAJZLER, V., V. CHLUPATÝ a M. LATEČKA. Properties of the flexible polymer multimode optical waveguides fabricated by using the direct microdispensing method. In: *Proceedings of the 2023 Photonics West 2023, LASE. SPIE Photonics West 2023, San Francisco, California, 2023-01-28/2023-02-03*. Washington: SPIE, 2023. s. 77-81. ISSN 1996-756X. ISBN 9781510659346. DOI 10.1117/12.2648061.
- PRAJZLER, V., V. CHLUPATÝ a M. NERUDA. Circular large core optical elastomer waveguides fabricated by using direct microdispense fabrication method. *Optik : International Journal for Light and Electron Optics*. 2022, 250(1), ISSN 0030-4026. DOI 10.1016/j.ijleo.2021.168348.
- PRAJZLER, V. a J. ZAVŘEL. Large core optical elastomer splitter fabricated by using 3D printing pattern. *Optical and Quantum Electronics*. 2021, 53(6), 2249-2258. ISSN 0306-8919. DOI 10.1007/s11082-021-02980-2.
- PRAJZLER, V. et al. All-Polymer Silk-Fibroin Optical Planar Waveguides. *Optical Materials*. 2021, 114 ISSN 0925-3467. DOI 10.1016/j.optmat.2021.110932.
- PRAJZLER, V. et al. Optical Polymer Waveguides Fabricated by Roll-to-Plate Nanoimprinting Technique. *Nanomaterials*. 2021, 11(3), 1-14. ISSN 2079-4991. DOI 10.3390/nano11030724.
- PRAJZLER, V., M. NERUDA a M. KVĚTOŇ. Effects of gamma rays on elastomer multimode optical channel waveguides. *Journal of Materials Science: Materials in Electronics*. 2020, 31(20), 17202-17211. ISSN 0957-4522.
- PRAJZLER, V. et al. Optical properties of deoxyribonucleic acid thin layers deposited on an elastomer substrate. *Optical Materials Express*. 2020, 10(2), 421-433. ISSN 2159-3930. DOI 10.1364/OME.10.000421.
- PRAJZLER, V., V. CHLUPATÝ a Z. ŠARŠOUNOVÁ. The effect of gamma-ray irradiation on bulk optical plastic materials. *Journal of Materials Science: Materials in Electronics*. 2020, 31(24), 22599-22615. ISSN 0957-4522.
- PRAJZLER, V. a V. CHLUPATÝ. Epoxy polymer optical waveguide for micro-opto-electro-mechanical systems. *Microsystem Technologies*. 2020, 26(9), 3029-3035. ISSN 0946-7076. DOI 10.1007/s00542-020-04921-7.
- PRAJZLER, V., P. JAŠEK a P. NEKVINDOVÁ. Inorganic-organic hybrid polymer optical planar waveguides for micro-opto-electro-mechanical systems (MOEMS). *Microsystem Technologies*. 2019, 25(6), 2249-2258. ISSN 0946-7076. DOI 10.1007/s00542-018-4105-x.
- PRAJZLER, V. et al. The properties of free-standing epoxy polymer multi-mode optical waveguides. *Microsystem Technologies*. 2019, 2019(25), 257-264. ISSN 0946-7076. DOI 10.1007/s00542-018-3960-9.
- PRAJZLER, V. a J. ZÁZVORKA. Polymer large core optical splitter 1x2 Y for high-temperature operation. *Optical and Quantum Electronics*. 2019, 51(7), ISSN 0306-8919. DOI 10.1007/s11082-019-1933-6.
- PRAJZLER, V., M. NERUDA a M. KVĚTOŇ. Flexible multimode optical elastomer waveguides. *Journal of Materials Science: Materials in Electronics*. 2019, 30(18), 16983-16990. ISSN 0957-4522. PRAJZLER, V., M. NERUDA a P. NEKVINDOVÁ. Flexible multimode polydimethyl-diphenylsiloxane optical planar waveguides. *Journal of materials science - materials in electronics*. 2018, 29(7), 5878-5884. ISSN 0957-4522.
- PRAJZLER, V. et al. The Investigation of the Waveguiding Properties of Silk Fibroin from the Visible to Near-Infrared Spectrum. *Materials*. 2018, 11(1), ISSN 1996-1944. DOI 10.3390/ma11010112.
- PRAJZLER, V. et al. The evaluation of the refractive indices of bulk and thick polydimethylsiloxane and polydimethyl-diphenylsiloxane elastomers by the prism coupling technique. *Journal of Materials Science: Materials in Electronics*. 2017, 28(11), 7951-7961. ISSN 0957-4522. DOI 10.1007/s10854-017-6498-1.
- PRAJZLER, V. et al. Large core plastic planar optical splitter fabricated by 3D printing technology. *Optics Communications*. 2017, (400), 38-42. ISSN 0030-4018. DOI 10.1016/j.optcom.2017.04.070.
- PRAJZLER, V., M. KNIETEL a R. MAŠTERA. Large core optical planar splitter for visible and infrared region. *Optical and Quantum Electronics*. 2016, 48 ISSN 0306-8919. DOI 10.1007/s11082-016-0444-y.