

Cooperation within WG 1

1. Prof. Erich Leitgeb – Institute of Microwave and Photonic Engineering Graz University of Technology, Austria

Cooperation:

- Department of Transmissions and Optical Technologies, National Institute of Telecommunications, Warsaw / Kielce University of Technology, Kielce, Poland
- National Institute of Telecommunications, Warsaw, Poland;
- Fiber Optics Communication Laboratory, National Polytechnic University of Armenia, Yerevan, Armenia
- Swansea University, College of Engineering, Bay Campus, Swansea, United Kingdom

Joint Proceeding Paper

- TU Graz, Austria and Swansea University, Swansea, United Kingdom;
Joint paper in CoBCom Proceedings, IEEE Catalog Number: CFP16CUA-USB; ISBN (USB): 978-1-5090-2269-4

2. Prof. Pawel Peterka – Institute of Photonics and Electronics, The Czech Academy of Sciences, Prague, Czech Republic

Cooperation

- Laser & Fiber Electronics Group, Faculty of Electronics, Wroclaw University of Technology, Wroclaw, Poland
- Institute of Electronic Materials Technology, Warsaw, Poland
- Leibniz Institute of Photonic Technology, Jena, Germany
- Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University, Prague, Czech Republic
- Laboratoire de Physique de la Matière Condensée, Université de Nice-Sophia-Antipolis, Nice, France

Joint Papers

- J. Sotor, M. Pawliszewska, G. Sobon, P. Kaczmarek, A. Przewolka, I. Pasternak, J. Cajzl, P. Peterka, P. Honzatko, I. Kasik, W. Strupinski, K. Abramski, "All-fiber Ho-doped mode-locked oscillator based on graphene saturable absorber," *Opt. Lett.* 41(11), 2592-2595 (2016). <https://doi.org/10.1364/OL.41.002592>
- P. Koska, P. Peterka and V. Doya, "Numerical modeling of pump absorption in coiled and twisted double-clad fibers," *IEEE J. Sel. Top. Quantum Electron.* 22(2), 55-62(2016). <http://dx.doi.org/10.1109/JSTQE.2015.2490100>
- Pavel Koška, Pavel Peterka, Jan Aubrecht, Ondřej Podraský, Filip Todorov, Martin Becker, Yauhen Baravets, Pavel Honzátko, and Ivan Kašík, "Enhanced pump absorption efficiency in coiled and twisted double-clad thulium-doped fibers," *Opt. Express* 24(1):102-107, 2016. <http://dx.doi.org/10.1364/OE.24.000102>
- J. Aubrecht, P. Peterka, P. Honzatko, Y. Baravets, M. Jelinek, V. Kubecek, M. Pawliszewska, J. Sotor, G. Sobon, K. M. Abramski, I. Kasik, "Characterization of holmium fibers with various concentrations for fiber laser applications around 2.1 μm ," *Proc. SPIE 9886, Micro-Structured and Specialty Optical Fibres IV*, 988607 (April 27, 2016). <http://dx.doi.org/10.1117/12.2227618>

3. Prof. Laetitia Petit – Optoelectronics Research Centre, Tampere University of Technology, Tampere, Finland

Cooperation

- Politecnico di Torino, Dipartimento di Scienza Applicata e Tecnologia (DISAT) and INSTM UdR Torino Politecnico, Torino, Italy
- Istituto Superiore Mario Boella, Torino, Italy
- IFN - CNR, CSMFO Lab., Povo (TN), Italy

Joint Papers + Proceedings

- “Effect of the addition of Al₂O₃, TiO₂ and ZnO on the thermal, structural and luminescence properties of Er³⁺-doped phosphate glasses”, P. Lopez-Iscoa, L. Petit, J. Massera, D. Janner, N. G. Boetti, D. Pugliese, S. Fiorilli, C. Novara, F. Giorgis, D. Milanese, Journal of Non-Crystalline Solids, 460 (2017) 161-168
- “Effect of partial crystallization on the thermal, structural and Er³⁺ luminescence properties of phosphate glasses”, P. Lopez-Iscoa, L. Petit, J. Massera, D. Milanese, D. Janner, N. G. Boetti, D. Pugliese, C. Novara, S. Fiorilli, M. Salvo, M. Ferraris, EMN Meeting on Photonics 2016, Barcelona (Spain) September 19th to 23th, 2016.
- “Synthesis and characterization of Er³⁺-doped Al₂O₃, TiO₂ and TiO₂@SiO₂ core-shell structure nanoparticles and their incorporation into phosphate glasses”, P. Lopez-Iscoa, M. Ferrari, M. Salvo, D. Milanese, L. Petit, J. Massera, G. Baldi, FOTONICA, June 6-8, Roma, Italy (2016)
- “Design, synthesis and characterization of innovative glasses with erbium-doped nanoparticles”, P Lopez-Iscoa, L. Petit, J. Massera, D. Milanese, G. Baldi, M. Salvo, M. Ferrari, Glass and Optical Materials division Spring meeting, May 22-26, Madison/WI, USA (2016)

4. Prof. Anthony C. Boucouvalas, FIEEE, FIET, FRSA. University of Peloponnese, Department of Informatics and Telecommunications. Terma Karaiskaki, Tripoli, Greece

Joint Papers + Proceedings

- “A Direct Formula for Ultra-large Effective Area Fibers Design with Top-hat Intensity Profile”, Christos Thraskias, Anthony Boucouvalas, IEEE Journal of Quantum Electronics, 53 (1), 2017,
- “Design of Arbitrary Shape Higher Order Mode Electric Field in Optical Fibers for High Power Applications”, Christos Thraskias, Anthony Boucouvalas, Journal of Lightwave Technology, 34 (21), 5056 – 5062, 2016.
- “Gain-guided optical fibre refractive index synthesis starting from arbitrary modal electric field”, Christos Thraskias, A. C. Boucouvalas, Electronics Letters, 51 (18), 1435 – 1437 (2015)

5. Prof. Daniel Milanese – Institute of Materials Physics and Engineering, Department of Applied Science and Technology, POLITECNICO DI TORINO, Italy

Cooperation

- Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology - Hellas (FORTH), Heraklion, Crete, Greece
- Cyprus University of Technology
- Optoelectronics Research Centre, Tampere University of Technology, Tampere, Finland
- Istituto Superiore Mario Boella, Torino, Italy
- CNR-IFN, Istituto di Fotonica e Nanotecnologie, Trento, Italy
- Optoelectronics Research Centre, University of Southampton, UK

Joint Papers + Proceedings

- “Novel biocompatible and resorbable UV-transparent phosphate glass based optical fiber”, E. Ceci-Ginistrelli, D. Pugliese, N. G. Boetti, G. Novajra, A. Ambrosone, J. Lousteau, C. Vitale-Brovarone, S. Abrate, D. Milanese, *Optical Mater Express* 6 (6), 2040 – 2051 (2016)
- “Concentration quenching in an Er-doped phosphate glass for compact optical lasers and amplifiers”, D. Pugliese, N. G. Boetti, J. Lousteau, E. Ceci-Ginistrelli, E. Bertone, F. Geobaldo, D. Milanese, *Journal of Alloys and Compounds*, 657 (2016), 678e683
- “Drug release kinetics from biodegradable UV-transparent hollow calcium-phosphate glass fibers”, E. Ceci-Ginistrelli, C. Pontremoli, D. Pugliese, N. Barbero, N. G. Boetti, C. Barolo, S. Visentin, D. Milanese, *Materials Letters* 191, 116–118 (2017)
- “Bragg grating UV inscription in a bioresorbable phosphate glass optical fiber”, M. Konstantakia, S. Pissadakis, D. Pugliese, E. Ceci-Ginistrelli, N. G. Boetti, D. Milanese, *ICTON 2016*, We.C6.1

6. Prof. Alicia Durán – Instituto de Cerámica y Vidrio, Campus de Cantoblanco, Madrid, SPAIN

Cooperation

- Bialystok University of Technology, Faculty of Electrical Engineering, Department of Power Engineering Photonics and Lighting Technology
- AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Krakow, Poland

7. Dr. Maurizio Ferrari – IFN-CNR Institute for Photonics and Nanotechnologies, Trento, Italy

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- IFAC-CNR Sesto Fiorentino, Firenze, Italy
- Department of Physics, Politecnico di Milano, Milano, Italy

Joint Papers + Proceedings

- A. Lukowiak, L. Zur, T. Ngoc Lam Tran, M. Meneghetti, S. Berneschi, G. N. Conti, S. Pelli, C. Trono, B.N. Shivakiran Bhaktha, D. Zonta, S. Taccheo, G. C. Righini, M. Ferrari, “Sol–Gel-Derived Glass-Ceramic Photorefractive Films for Photonic Structures”; *Crystals* 7 (2017) pp. 61_1/7; doi:10.3390/cryst7020061
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- A. de Pablos-Martin, D. Ristic, A. Durán, M. Ferrari, M. J. Pascual, “Crystallization and optical properties of Tm³⁺/Yb³⁺- co-doped KLaF₄ glass-ceramics” *Cryst Eng Comm* 19 (2017) pp 267-274; doi: 10.1039/c6ce01845a
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- M.C. Falconi, G. Palma, F. Starecki, V. Nazabal, J. Troles, J.-L. Adam, S. Taccheo, M. Ferrari, F. Prudenzano, “Recent Advances on Pumping Schemes for Mid-IR PCF Lasers” *Proceedings of SPIE vol. 10100* (2017) pp. 1010002-1/7 doi: 10.1117/12.2251710 Invited paper SPIE Photonic West 2017 Optical Components and Materials XIV
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- A. Chiasera, J. Jasieniak, S. Normani, S. Valligatla, A. Lukowiak, S. Taccheo, D. Narayana Rao, G. C. Righini, M. Marciniak, A. Martucci, M. Ferrari “Hybrid 1-D dielectric microcavity: Fabrication and spectroscopic assessment of glass-based sub-wavelength structures” *Ceramics International* 41 (2015) pp. 7429-7433; doi: 10.1016/j.ceramint.2015.02.059
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- D. Dorosz, M. Kochanowicz, J. Zmojda, P. Miluski, M. Marciniak, A. Chiasera, A. Chiappini, I. Vasilchenko, M. Ferrari, G. Righini “Rare-Earth Doped Materials for Optical Waveguides” Invited paper Proceedings ICTON 2015, 17th International Conference on Transparent Optical Networks, Budapest, Hungary, July 5-9, 2015. Page(s): 1 – 5, doi: 10.1109/ICTON.2015.7193546
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8. Prof. Virginie Nazabal / Prof. Johann Troles – Institut des Sciences Chimiques de Rennes, Université de Rennes Campus de Beaulieu, Rennes, France

Cooperation

- CIMAP, University of Caen, France
- FOTON, University of Rennes, France
- XLIM-Institute, University of Limoges, France
- Czech Republic : Department of Graphic Arts and Photophysics, Faculty of Chemical Technology, University of Pardubice, (2016- STSM)
- Finland : Tampere University of Technology, Tampere
- Italy : Department of Electrical and Information Engineering, Politecnico di Bari,
- Italy : University of Trento
- Norway : Department of Physics, NTNU Norwegian University of Science and Technology, (2017- STSM)
- Wales : Institute of Advanced Telecommunications, Swansea University

Joint Papers + Proceedings

- M. C. Falconi, G. Palma, F. Starecki, V. Nazabal, J. Troles, J. L. Adam, S. Taccheo, M. Ferrari, and F. Prudeniano, "Dysprosium-Doped Chalcogenide Master Oscillator Power Amplifier (MOPA) for Mid-IR Emission," Journal of Lightwave Technology 35, 265-273 (2017).
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- R. Chahal, F. Starecki, C. Boussard-Plédel, J.-L. Doualan, K. Michel, L. Brilland, A. Braud, P. Camy, B. Bureau, and V. Nazabal, "Fiber evanescent wave spectroscopy based on IR fluorescent chalcogenide fibers," *Sensors and Actuators B: Chemical* 229, 209-216 (2016).
- A. Gutierrez-Arroyo, E. Baudet, L. Bodiou, V. Nazabal, E. Rinnert, K. Michel, B. Bureau, F. Colas, and J. Charrier, "Theoretical study of an evanescent optical integrated sensor for multipurpose detection of gases and liquids in the Mid-Infrared," *Sensors and Actuators B: Chemical* (2016).

9. Dr. Kay Schuster – Leibniz Institute of Photonic Technology, Jena, Germany

Cooperation

- CNRS / University of Limoges, XLIM-Institute
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- Institute for Systems and Computer Engineering, Technology and Science – INESC TEC, Porto, Portugal
- Optoelectronics Research Centre, Tampere University of Technology, Tampere, Finland

10. Prof. Dominik Dorosz – AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Krakow, Poland

- COST MP 1401 related session during the upcoming "International Conference on Molecular Spectroscopy", September 2017, Białka Tatrzańska, Poland