

Sabina Merlo – Selected publications

Papers in international scientific journals with referees

2020-2019

- V. Bello, S. Merlo, **Micro-opto-fluidic platform for solvents identification based on absorption properties in the NIR region**, *Analytical and Bioanalytical Chemistry*, in Topical collection *Advances in Direct Optical Detection*, Vol. 412, No. 14, May 15, pp. 3351-3358 (2020). DOI: 10.1007/s00216-019-02375-z.
- V. Bello, A. Simoni, S. Merlo, **Spectral phase shift interferometry for refractive index monitoring in micro-capillaries**, *Sensors*, Vol. 20, No. 4, Article No. 1043, pp. 1 – 12 (2020). DOI: 10.3390/s20041043.
- P. Su, R. Pujari, V. Boodhoo, S. Aggarwal, P. Bhattacharya, O. Maksimov, K. Wada, S. Merlo, H. B. Bhandari, L. C. Kimerling, A. Agarwal, **Ternary Lead Chalcogenide Alloys for Mid-Infrared Detectors**, *Journal of Electronic Materials*, (2020) DOI: 10.1007/s11664-020-08114-w.
- V. Bello, E. Bodo, S. Pizzurro, S. Merlo, **In Vivo Recognition of Vascular Structures by Near-Infrared Transillumination**, *Proceedings*, Vol. 42, Article No. 24 (2020). DOI:10.3390/ecsa-6-06639.
- S. Merlo, V. Bello, E. Bodo, S. Pizzurro, **A VCSEL-based NIR transillumination system for morpho-functional imaging**, *Sensors*, Vol. 19, No. 4, Article No. 851, pp. 1 – 13 (2019). DOI:10.3390/s19040851. [

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- S. Merlo, E. Crisà, D. Giusti, M. Ferrera, M. Soldo, **Characterization of tunable micro-lenses with a versatile optical measuring system**, *Sensors*, Vol. 18, No. 12, pp. 1 – 14 (2018).
- S. Surdo, F. Carpignano, S. Merlo, G. Barillaro, **Near-Infrared Silicon Photonic Crystals with High-Order Photonic Bandgaps for High-Sensitivity Chemical Analysis of Water-Ethanol Mixtures**, *ACS Sensors*, Vol. 3, No. 11, pp. 2223–2231, November 2018, Publication Date (Web): October 31, 2018 (Letter), DOI: 10.1021/acssensors.8b00933.
- G. Rigamonti, V. Bello, S. Merlo, **Spectral optical readout of rectangular – miniature hollow glass tubing for refractive index sensing**, *Sensors*, Vol. 18, No. 2, Article No. 603, (2018) DOI:10.3390/s18020603
- G. Rigamonti, M. Guardamagna, V. Bello, S. Marconi, F. Auricchio, S. Merlo, **Flow-through micro-capillary refractive index sensor based on T/R spectral shift monitoring**, *Biomedical Optics Express*, Vol. 8, No. 10, pp. 4438-4453 (2017). DOI:10.1364/BOE.8.004438
- S. Merlo, P. Poma, E. Crisà, D. Faralli, M. Soldo, **Testing of Piezo-Actuated Glass Micro-Membranes by Optical Low-Coherence Reflectometry**, *Sensors*, Vol. 17, No. 3, Article No. 462, pp. 1 – 8 (2017). DOI:10.3390/s17030462

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- G. Rigamonti, M. Guardamagna, S. Merlo, **Non-contact reflectometric readout of disposable microfluidic devices by near infra-red low-coherence interferometry**, *AIMS Biophysics*, vol. 3, No. 4, pp. 571-581 (2016).
- F. Carpignano, G. Rigamonti, G. Mazzini, S. Merlo, **Low-coherence reflectometry for refractive index measurements of cells in micro-capillaries**, *Sensors*, vol. 16, Article No. 1670, pp. 1 – 12 (2016).
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- F. Aredia, F. Carpignano, S. Surdo, G. Barillaro, G. Mazzini, A.I. Scovassi, S. Merlo, **An innovative cell micro-incubator for drug-discovery based on 3D silicon structures**, *Journal of Nanomaterials*, vol. 2016, Article ID 8236539, pp. 1-10 (2016).
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- F. Carpignano, S. Surdo, G. Barillaro, S. Merlo, **Silicon micromachined device testing by infrared low-coherence reflectometry**, *IEEE Journal of Microelectromechanical Systems*, Vol. 24, No. 6, pp. 1960 – 1964 (2015).
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▪ S. Surdo, S. Merlo, F. Carpignano, G. Silva, G. Barillaro, **An all-silicon optical platform based on linear array of vertical high-aspect-ratio silicon/air photonic crystals**, *Applied Physics Letters*, Vol. 103, pp. 171103_1-171103_5 (2013).

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▪ S. Merlo, F. Carpignano, G. Silva, S. Surdo, G. Barillaro, F. Aredia, A.I. Scovassi, G. Mazzini, **3D cell microincubator with intrinsic optical transduction capability for advanced cell analyses**, *Cytometry A*, Vol. 83A, No. 12, p. 42-43 (2013).

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Book chapters

- S. Surdo, F. Carpignano, A. Giannetti, L.M. Strambini, C. Trono, F. Baldini, **S. Merlo**, G. Barillaro, **Photonic Crystal Optofluidic Silicon Microsystems for (Bio)Sensing**, pp. 353-357, Chapter 63 in "Sensors, Series: Lecture Notes in Electrical Engineering", Vol. 162, F. Baldini et al. Eds., Springer (2014).
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