












## Jakub Dostalek - publication record


















### Book chapters

1. K. Toma, M. Toma, M. Bauch, S. Hageneder, J. Dostalek, "Fluorescence biosensors utilizing grating-assisted plasmonic amplification" in "Surface Plasmon Enhanced, Coupled and Controlled Fluorescence" edited by Chris Geddes, Wiley (2017) ISBN: 978-1-118-02793-6. 
2. N. G. Quillis, N. Sharma, S. Fossati, W. Knoll, J. Dostalek, "Responsive polymer networks and brushes for active plasmonics" in Polymer and Biopolymer Brushes: Fundamentals and Applications in Materials Science and Biotechnology, edited by Omar Azzaroni and Igal Szleifer, John Wiley & Sons, Ltd. (2017), ISBN:1118928903. 
3. A. T. Reiner, K. Toma, A. R. Brisson, D. Pils, W. Knoll and J. Dostalek, "Plasmonic Exosome Biosensors for Medical Diagnostics" in, Frontiers in Biophotonics for Translational Medicine, Progress in Optical Science and Photonics 3, edited by M. Olivo and U. S. Dinis, Springer Science+Business Media Singapore (2016) DOI 10.1007/978-981-287-627-0\_8. 
4. J. Dostalek, "Plasmonic Amplification for Fluorescence Bioassays Utilizing Propagating Surface Plasmons" in Encyclopedia of Nanotechnology, Springer Science+Business Media Dordrecht (2015), DOI 10.1007/978-94-007-6178-0\_100986-1 
5. J. Dostalek, "Plasmonic Amplification for Fluorescence Bioassays Utilizing Propagating Surface Plasmons" in Encyclopedia of Nanotechnology, Springer Science+Business Media Dordrecht (2015), DOI 10.1007/978-94-007-6178-0\_100986-1 
6. W. Knoll, A. Kasry, C. J. Huang, Y. Wang, J. Dostalek, "Surface-Wave Enhanced Biosensing" in "Introduction to Plasmonics" edited by Sabine Szunerits, Pan Stanford Publishing, Singapore, (2015), ISBN: 9789814613125. 
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9. Dostálek J and Knoll W Plasmonics in „Polymer Science: A Comprehensive Reference“, Vol 2, pp. 647–659. Edited by Matyjaszewski K and Möller M, Amsterdam: Elsevier BV. (2012) ISBN: 978-0-08-087862-1. 
10. J. Dostalek, C. J. Huang, W. Knoll: Chapter 1.3: Surface plasmon resonance-based biosensors, in Advanced surface design for biomaterial and life science applications, edited by A.T.A. Jenkins, R. Foersch, H. Schoenherr, Wiley-VCH, Weinheim (2009), 29-49, ISBN: 978-3-527-40789-7. 
11. A. Kasry, J. Dostalek, W. Knoll: Chapter 5.4: Long range surface plasmon-enhanced fluorescence spectroscopy as a platform for biosensors, in Advanced surface design for biomaterial and life science applications, edited by A.T.A. Jenkins, R. Foersch, H. Schoenherr, Wiley-VCH, Weinheim (2009), 447-460, ISBN: 978-3-527-40789-7. 
12. J. Dostálek, J. Homola: SPR Biosensors for Environmental Monitoring, in Surface Plasmon Resonance Based Sensors, editor J. Homola, Springer (2006).
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1. Christian Stelling, Stefan Fossati, Jakub Dostalek, Markus Retsch, Surface Plasmon Modes of Nanomesh-on-Mirror Nanocavities prepared by Nanosphere Lithography, submitted.
2. Nestor G. Quilis, M. Lequeux, P. Venugopalan, I. Khan, S. Boujday, W. Knoll, M. Lamy de la Chapelle, J. Dostalek, *Nanoscale*, 2018, Tunable laser interference lithography preparation of plasmonic nanoparticle arrays tailored for SERS, in press. ☒
3. Esteban Piccinini, Sebastian Alberti, Gabriel S. Longo, Teresa Berninger, Jakub Dostalek, Fernando Battaglini, Omar Azzaroni, and Wolfgang Knoll, Pushing the boundaries of interfacial sensitivity in graphene FET sensors: Polyelectrolyte multilayer films strongly increase the Debye screening length, *Journal of Physical Chemistry C*, 2018, in press.
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5. Agnes T. Reiner; Stefan Fossati, Jakub Dostalek, Biosensor platform for parallel surface plasmon-enhanced epifluorescence and surface plasmon resonance detection, *Sensors and Actuators B*, 2018, 257, 594-601. ☒
6. Khulan Sergelen, Christian Petri, Ulrich Jonas, and Jakub Dostálek, Free-standing hydrogel-particle composite membrane with dynamically controlled permeability for lab-on-chip applications, *Biointerphases*, 2017, 12, 051002. ☒
7. Khulan Sergelen, Bo Liedberg, Wolfgang Knoll, and Jakub Dostálek, Surface plasmon field-enhanced fluorescence reversible split aptamer biosensor, *Analyst*, 2017 (142) 2995-3001. ☒
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10. Imran Khan, Martin Bauch, Theodoros Dimopoulos, and Jakub Dostalek, Nanostructured as-deposited indium tin oxide thin films for broadband antireflection and light trapping, *Nanotechnology*, 2017, 28(32), 325201. ☒
11. A. Vagias, K. Sergelen, K. Koynov, P. Košován, J. Dostalek, U. Jonas, W. Knoll, G. Fytas, Diffusion and permeation of labeled IgG in grafted hydrogels, *Macromolecules*, 2017, 50 (12), 4770–4779.
12. T. Riedel, F. Surman, S. Hageneder, O. Pop-Goergovski, A. de los Santos Pereira, E. Brynda, C. Rodriguez-Emmenegger, J. Dostalek, Hepatitis B plasmonic biosensor for the analysis of clinical saliva samples, *Analytical Chemistry*, 2017, 89 (5), pp 2972–2977 ☒
13. F. Pirani, N. Sharma, A. M. Cencerrado. S. Fossati, C. Petri, U. Jonas, E. Descrovi, J. L. Toca-Herrera, J. Dostalek, Diffraction observation of responsive properties of hydrogel nanopillars, *Macromolecular Chemistry and Physics*, 2017, 218 (6), 1600400 ☒
14. A. Karczmarczyk, C. Reiner-Rozman, M. Dubiak-Szepietowska, J. Dostalek, K-H. Feller, Fast and sensitive detection of Ochratoxin A in red wine by nanoparticle enhanced SPR, *Analytica Chimica Acta*, 2016, 937, 143-150.

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17. Y. Wang, L. Wu, M. Bauch, Q. Zhang, J. Zhang, X. Liu, X. Zhou, P. Bai, J. Dostalek, B. Liedberg, Directional Fluorescence Emission Co-Enhanced by Localized and Propagating Surface Plasmons for Biosensing, *Nanoscale*, 2016, 2016, 8, 8008-8016.
18. A. Karczmarczyk, M. Dubiak-Szepietowska, M. Vorobii, C. Rodriguez-Emmenegger, J. Dostalek, K-H. Feller, Sensitive and rapid detection of aflatoxin M1 in milk utilizing enhanced SPR and p(HEMA) brushes, *Biosensor and Bioelectronics*, 2016, 81, 159-165.
19. F. Frascella, C. Petri, S. Ricciardi, L. Nاپione, P. Munzert, U. Jonas, J. Dostalek, F. Bussolino, F. Pirri, E. Descrovi, Hydrogel-terminated photonic crystal for label-free detection of Angiopoietin-1, *Journal of Lightwave Technology*, (2016), 34 (15), 3641-3645.
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26. C.J. Huang, W. Knoll, A. Sessitsch, J. Dostalek, SPR bacterial pathogen biosensor: the importance of fluidic conditions and probing depth, *Talanta*, (2014) 122, 166-171. ☒
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35. M. Toma, W. Knoll, J. Dostalek, Bragg-scattered surface plasmon microscopy, *Plasmonics* (2012) 7(2), 293-299. 
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#### Invited and keynote speaker at symposia

1. N. Quilis, D. Kotlarek, S. Hageneder, S. Fossati, C. Petri, U. Jonas, J. Dostalek, Plasmonic biosensors powered by hydrogel nanostructures, ICMAT 17, July 18-23<sup>rd</sup> 2017, Singapore. (invited talk)
2. J. Dostalek, Plasmonically amplified fluorescence for biomarker analysis, META 16, Malaga, July 24-28<sup>th</sup> 2016, Spain. (invited talk)

3. J. Dostalek, Hydrogel-based interfaces for plasmonic biosensor and actuating, BIOGEL symposium Active Hydrogels, Schloss Ringberg-Kreutz, May 15-18<sup>th</sup>, Germany. (invited talk)
4. J. Dostalek, Plasmonic biosensing advanced by nanostructured hydrogel biointerface, Egyptian Materials Research International Conference, Jan. 8<sup>th</sup> 2016. (invited talk)
5. M. Bauch, S. Hageneder, A. Reiner, K. Sergelen, C. Petri, U. Jonas, J. Dostalek, Plasmonic amplification of fluorescence for biosensing, Nano and Photonics, Mauterndorf, Austria, March 19<sup>th</sup>-21<sup>st</sup> 2015. (invited talk)
6. J. Dostalek, Plasmonic amplification for fluorescence assays, SPIE Optics + Optoelectronics, Prague, Czech Republic, 13 - 16 April 2015. (invited talk)
7. J. Dostalek, Plasmonically Amplified Fluorescence Biosensors, CeNano Symposium, Linköping, Sweden, November 27<sup>th</sup> 2014. (invited talk)
8. J. Dostalek, U. Jonas, C. Petri, N. Sharma, S. Hageneder, T. Riedel, Plasmonic Biosensors Advanced by Functional Hydrogels, NanoBioMed, Barcelona, November 18<sup>th</sup> - 21<sup>st</sup> 2014 (invited talk)
9. J. Dostalek, M. Bauch, S. Hagender, K. Sergelen, Fluorescence biosensors with plasmonically amplified signal, Annual Conference Brno 2014: Frontiers in Material and Life Sciences, 21 to 24 October 2014, (invited talk)
10. J. Dostalek, Plasmon-Enhanced Fluorescence: Amplification Strategy in Fluorescence Biosensors, 30 years in SPR biosensors, Singapore, November 5<sup>th</sup>-7<sup>th</sup> 2013. (invited)
11. J. Dostalek, Plasmonic Biosensors Advanced by (Responsive) Functionalized Hydrogels, SoftControl, Darmstadt, September 22-24<sup>th</sup> 2013. (invited talk)
12. J. Dostalek, Y. Wang, C.J. Huang, H. Bao, Surface plasmon resonance biosensor for detection of bacterial pathogens: strategies for enhanced sensitivity, Nanoelectronic Devices for Defense & Security, New York, USA, August 29<sup>th</sup> - September 1<sup>st</sup> 2011. (invited talk)
13. M. Toma, K. Toma, U. Jonas, A. Mateescu, J. Dostalek, Plasmonic biosensors advanced by rapidly responsive hydrogels, 6<sup>th</sup> International Symposium on Surface Sciences, Tokyo, December 11-15, 2011. Book of abstracts pp. 99. (invited talk)
14. J. Dostalek, Y. Wang, C.J. Huang, A. Aulasevich, R. Roskamp, A. Brunsen, W. Knoll, Surface plasmon mediated fluorescence for biosensing, 4<sup>th</sup> International Symposium on Medical, Bio- and Nano-Electronics, Sendai, March 5-6, 2009, Book of abstracts pp. 21. (invited talk)

### Patents

1. H. Xie, J. Han, A. Kibrom, W. Knoll, J. Dostalek, A hydrogel, for use in a biosensor with optics based detection of analytes, patent application, WO 2014116179, EP13872642
2. K. Toma, J. Dostalek, W. Knoll, J. Homola, M. Vala, P. Adam, Compact Biochip for Plasmon-Enhanced Fluorescence Biosensor, European Patent Office, EP12168046.
3. J. Čtyroký, J. Dostálek, J. Homola: Means for Multichannel Detection in Optical Sensors with Surface Plasmons, registered at Czech Patent and Trademark Office, CZ291728.
4. O. Telezhnikova, J. Dostálek, J. Homola: Method For Spectroscopy Of Surface Plasmons In Surface Plasmon Resonance Sensors And An Element For The Use Of Thereof, CZ299489, US20080144027, CA2598118, CN101175989.

### Conference papers

1. Nestor Gisbert Quilis, Marcel van Dongen, Christian Petri, Ulrich Jonas, Wolfgang Knoll, Martin Möller, Ahmed Mourran, Jakub Dostalek, Active Hybrid Hydrogel-Metallic Nanostructures for Plasmonic Biosensor Applications, Nanophotonics and Micro/Nano Optics International Conference 2017, Barcelona, Sept 13–15, 2017 (poster).
2. Hageneder S, Fossati S, Petri C, Jonas U, Knoll W, Dostalek J, Plasmon-enhanced fluorescence biosensor utilizing metallic nanostructures and responsive hydrogel binding matrix, Nanophotonics and Micro/Nano Optics International Conference 2017, Barcelona, Sept 13–15, 2017 (poster).
3. Daria Kotlarek, Jakub Dostalek, Metallic nanohole arrays combined with thermo-responsive hydrogel for operation in a flow-through assay format, Nanophotonics and Micro/Nano Optics International Conference 2017, Barcelona, Sept 13–15, 2017 (poster).
4. Andreas Geiss, Stefan Fossati, Imran Khan, Nestor Quilis, Wolfgang Knoll and Jakub Dostalek, UV-SPR biosensor for biomolecular interaction studies, Nano and Photonics, Mauterndorf 20-27<sup>th</sup> March 2017 (poster)
5. Priyamvada Venugopalan, Nestor Gisbert Quilis , Médéric Lequeux, Marc Lamy De La Chapelle, Souhir Boujday, Jakub Dostalek, Wolfgang Knoll, Plasmonic nanostructures for combined SERS - QCM biosensing of low molecular weight analytes, Nano and Photonics, Mauterndorf 20-27<sup>th</sup> March 2017 (poster)
6. Priyamvada Venugopalan, Nestor Gisbert Quilis, Médéric Lequeux, Jakub Dostalek, Wolfgang Knoll, SERS substrates for in-situ biosensing, SPIE Optics + Optoelectronics, Prague, 24 - 27 April 2017 (talk by PV).
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8. K. Sergelen, D. Kotlarek, J. Dostalek, J. Dostalek, Plasmonically mediated fluorescence biosensors with aptamer ligands, SPIE Optics + Optoelectronics, Prague, 24 - 27 April 2017 (talk).
9. Andreas Geiss, Stefan Fossati, Imran Khan, Nestor Quilis, Wolfgang Knoll and Jakub Dostalek, UV-SPR biosensor for biomolecular interaction studies, SPIE Proceedings 10231, Optical Sensors 2017, (2017) 1023107.
10. Agnes T. Reiner, Nicolas Guiler Ferrer Sanchez, Priyamvada Venugopalan, Ruenn Chai Lai, Sai-Kiang Lim, Jakub Dostalek, Magnetic nanoparticle-enhanced surface plasmon resonance biosensor for EV analysis, ISEV2017, 18<sup>th</sup> – 21<sup>st</sup> May 2017, Toronto. (poster)
11. Florian Kolb, Birgit Six, Imran Khan, Gerhard Peharz, Jakub Dostalek, Franz-Peter Wenzl, Emil J. W. List-Kratochvil, Tuning Light Trapping in Organic Photovoltaics, Nano and Photonics, Mauterndorf, Austria, March 22<sup>th</sup>-24<sup>st</sup> 2017. (poster)
12. J. Dostalek, Plasmonically enhanced fluorescence biosensors, NILIndustrialday, Vienna, March 10-12<sup>th</sup> 2016 (talk)
13. J. Dostalek, Plasmonically amplified fluorescence bioassays, Europtrode XIII, Graz, March 20<sup>th</sup> -23<sup>rd</sup> 2016 (talk).
14. S. Hageneder, C. Petri, U. Jonas, W. Knoll, Dostálek J., Responsive hydrogel binding matrix for optical biosensors with microarray format, Europtrode XIII, Graz, March 20<sup>th</sup> -23<sup>rd</sup> 2016 (poster).
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