

# PUBLICATIONS OF DR. RER. NAT. MICHAEL WAGNER

## *Peer-reviewed Journals*

**Wagner M.**, Taherzadeh D., Haisch C. and Horn H., Investigation of the mesoscale structure and volumetric features of biofilms using optical coherence tomography, *Biotechnology and Bioengineering* Vol. 107, No. 5, 844-853, 2010.

**Wagner M.**, Manz B., Volke F., Neu T.R. and Horn H., Online assessment of biofilm development, sloughing and forced detachment in tube reactor by means of magnetic resonance microscopy, *Biotechnology and Bioengineering*, Vol. 107, No. 1, 172-181, 2010.

Ivleva N. P., **Wagner M.**, Szkola A., Horn H., Nießner R. and Haisch C., Label-free in situ SERS imaging of biofilms, *The Journal of Physical Chemistry B*, Vol. 114, No. 31, 10184-10194, 2010.

Ivleva N. P., **Wagner M.**, Horn H., Nießner R. and Haisch C., Raman microscopy and surface-enhanced Raman scattering (SERS) for in situ analysis of biofilms, *Journal of Biophotonics*, Vol. 3, No. 8-9, 548-556, 2010.

Ivleva N. P., **Wagner M.**, Horn H., Nießner R. and Haisch C., Towards a nondestructive chemical characterization of biofilm matrix by Raman microscopy, *Analytical and Bioanalytical Chemistry* Vol. 393, No. 1, 197-206, 2009.

**Wagner M.**, Ivleva N. P., Haisch C., Nießner R. and Horn H., Combined use of confocal laser scanning microscopy (CLSM) and Raman microscopy (RM): Investigations on EPS-matrix, *Water Research* Vol. 43, 63-76, 2009.

Ivleva N. P., **Wagner M.**, Horn H., Nießner R. and Haisch C., In situ surface-enhanced Raman scattering analysis of biofilm, *Analytical Chemistry*, Vol. 80, No. 22, 8538-8544, 2008.

## *International Conferences*

Horn H., **Wagner M.**, Matruglio R., Does multi-scale imaging help to understand biofilm physics?, European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS), Vienna, Austria, 10.-14.09.2012

Ivleva N. P., Wagner M., Haisch C., Horn H. and Nießner R., *In situ* Biofilm Imaging by means of Raman Microscopy and Surface Enhanced Raman Scattering, IWA Conference, Processes in Biofilms, Shanghai, China, 27.-30.10.2011.

Wagner M., Reisen P., Krah M. and Horn H., Mesoscopic structure of biofilms characterized by optical coherence tomography compared to microscopic images generated with confocal laser scanning microscopy, IWA Conference, Processes in biofilms: Fundamentals to applications, Davis, CA, USA, 13.-16.09.2009.

Ivleva N. P., **Wagner M.**, Horn H., Nießner R. and Haisch C., Non-destructive chemical characterization of biofilm matrix by Raman microscopy, BIOFILMS III, Munich, Germany, 06.-08.10.2008.

## *National Conferences*

Ivleva N.P., **Wagner M.**, Horn H., Nießner R. and Haisch C., In situ Chemical Imaging der Biofilmmatrix mittels Raman-Mikroskopie und oberflächenverstärkter Raman-Streuung (SERS), WASSER 2011, Berlin, Germany, 02.-05.05.2011.

**Wagner M.**, Hille A., Müller E., Walters E. and Horn H., Einsatz der konfokalen Laser Scanning Mikroskopie zur Charakterisierung bakterieller Beläge. 2. Wasserseminar für die Getränke- und Lebensmittelindustrie, Freising, Germany, 18./19.09.2008.

## *Posters*

Ivleva N.P., **Wagner M.**, Horn H., Nießner R. and Haisch C., Iron Precipitation in Wastewater Biofilms Characterized by Raman Microscopy, WASSER 2012, Neu-Ulm, Germany, 14.-16.05.2012

Ivleva N.P., **Wagner M.**, Horn H., Nießner R. and Haisch C., In situ chemische Charakterisierung von Biofilmen mittels Raman-Mikroskopie (RM) and oberflächenverstärkter Raman-Streuung (SERS), ANAKON 2011, Zurich, Switzerland, 22.-25.03.2011.

Ivleva N.P., **Wagner M.**, Horn H., Nießner R. and Haisch C., Raman microscopy and surface-enhanced Raman scattering for in situ biofilm characterization, BIOFILMS IV, Winchester, UK, 01.-03.09.2010.

**Wagner M.**, Taherzadeh D., Krah M. and Horn H., In situ visualization of mesoscale biofilm structure by means of optical coherence tomography, BIOFILMS IV, Winchester, UK, 01.-03.09.2010.

Ivleva N.P., **Wagner M.**, Horn H., Nießner R. and Haisch C., Characterization of the biofilm matrix using Raman microscopy and surface-enhanced Raman scattering (SERS), IWA Conference, Processes in Biofilms: Fundamentals to Applications, Davis, CA, USA, 13.-16.09.2009.

**Wagner M.**, Manz B., Volke F., Krah M., Koch P. and Haisch C., Potential successors of confocal laser scanning microscopy for the three-dimensional visualization of biofilms, BIOFILMS III, Munich, Germany, 06.-08.10.2008.

Ivleva N.P., **Wagner M.**, Nießner R. and Haisch C., Untersuchung der zeitlichen Entwicklung der Biofilmmatrix mit Hilfe Raman-Mikroskopie and der konfokalen Laser-Scanning-Mikroskopie, IFAT 2008, Munich, Germany, 05.-09.05.2008.

Ivleva N.P., **Wagner M.**, Horn H., Nießner R. and Haisch C., Zerstörungsfreie Analyse von Biofilmmatrix mittels Raman-Mikroskopie, WASSER 2008, Trier, Germany, 28.-30.04.2008.

Ivleva N.P., **Wagner M.**, Horn H., Nießner R. and Haisch C., Untersuchungen der Biofilmmatrix mittels Raman-Mikroskopie, WASSER 2007, Passau, Germany, 14.-16.05.2007.

## *Uncategorized Stuff*

**Wagner M.**, Taherzadeh D., Haisch C. and Horn H., Closing the gap between micro- and macroscale, *spotlight feature* in Biotechnology and Bioengineering, Vol. 107, No. 5, 2010.

Thorlabs Inc. and **Wagner M.**, Biofilm structure at the mesoscale investigated using spectral domain OCT, *advertisement feature* in Nature Photonics, Vol. 4, No. 11, 2010.

**Wagner M.**, Manz B., Volke F., Neu T. R. and Horn H., Interaction of biofilm structure and bulk liquid flow, *spotlight feature* in Biotechnology and Bioengineering, Vol. 107, No. 1, 2010.

Thorlabs Inc. and **Wagner M.**, Biofilm imaging using spectral radar OCT, *advertisement feature* in Nature Photonics, Vol. 2, No. 12, 2008.