

## 1) **General Information**

**Hager, Martin D.**, Dr., 06.02.1980, male

Institute for Organic Chemistry and Macromolecular Chemistry (IOMC), Friedrich Schiller University, Humboldtstr. 10, 07743 Jena

Jena Center for Soft Matter (JCSM), Friedrich Schiller University Jena, Philosophenweg 7, 07743 Jena

Phone: +49 (0) 3641 948227; E-mail: martin.hager@uni-jena.de

Group leader / junior research group leader

2 children (9/5 years), parental leaves (09/10 – 11/10; 05/14-7/14)

## 2) **University education with degree**

Diploma in chemistry, Friedrich Schiller University Jena (02/2005)

Study of chemistry, Friedrich Schiller University Jena (10/2000-02/2005)

## 3) **Scientific degrees**

PhD in chemistry, Friedrich Schiller University Jena (2007; supervisor Prof. E. Klemm)

PhD studies, Friedrich Schiller University Jena (2005-2007; supervisor Prof. E. Klemm)

## 4) **Professional career since final degree**

10/2008- Junior group leader/Habilitand, Friedrich Schiller University Jena (Prof. Schubert)

06/2008-12/2017 Scientific administrator SPP 1568

10/2007-09/2008 Postdoc, TU Eindhoven (Prof. U. S. Schubert)

## 5) **Others**

### Prices and honors:

Thüringer Forschungspreis für Angewandte Forschung 2017 (with Prof. Dr. U. S. Schubert und T. Janoschka)

„Clustersieger Chemie/Kunststoffe des IQ Innovationspreis Mitteldeutschland“ 2015 (with Prof. Dr. U. S. Schubert und T. Janoschka) (2015)

FCI Stipendium (2005-2007)

Landesgraduierstipendium (2005)

## 6) **Publications**

**M. D. Hager**, P. Greil, C. Leyens, S. van der Zwaag, U. S. Schubert, "Self-healing Materials", *Adv. Mater.* **2010**, 22, 5424-5430.

G. R. Whittell, **M. D. Hager**, U. S. Schubert, I. Manners, „ Functional soft materials from metallopolymer and metallosupramolecular polymers“, *Nature Mater.* **2011**, 10, 176-188.

S. Bode, L. Zedler, F. H. Schacher, B. Dietzek, M. Schmitt, J. Popp, **M. D. Hager**, U. S. Schubert, „ Self-healing polymer coatings based on crosslinked metallosupramolecular copolymers “ *Adv. Mater.* **2013**, 25, 1634-1638.

N. Kuhl, S. Bode, R. K. Bose, J. Vitz, S. Hoeppe, S. J. Garcia, S. van der Zwaag, **M. D. Hager**, U. S. Schubert, *Adv. Funct. Mater.* 2015, 25, 3295-3301.

T. Janoschka, N. Martin, U. Martin, C. Friebe, S. Morgenstern, H. Hiller, **M. D. Hager**, U. S. Schubert, „ An aqueous, polymer-based redox-flow battery using non-corrosive, safe, and low-cost materials“, *Nature* **2015**, 527, 78-81.

- A. Fuhrmann, R. Göstl, R. Wendt, J. Kötteritzsch, **M. D. Hager**, U. S. Schubert, K. Brademann-Jock, A. F. Thünemann, U. Nöchel, M. Behl, S. Hecht, „Conditional repair by locally switching the thermal healing capability of dynamic covalent polymers with light“, *Nature Commun.* **2016**, 7, 13623.
- N. Kuhl, M. Abend, S. Bode, U. S. Schubert, **M. D. Hager**, „Oxime crosslinked polymer networks: Is every reversible covalent bond suitable to create self-healing polymers?“ *J. Appl. Polym. Sci.* **2016**, 44, 44168.
- J. Ahner, M. Micheel, J. Kötteritzsch, B. Dietzek, **M. D. Hager**, „Thermally triggered optical tuning of  $\pi$ -conjugated graft copolymers based on reversible Diels–Alder reaction“, *RSC Adv.* **2016**, 6, 98221-98227.
- S. Bode, R. Geitner, M. Abend, M. Siegmann, M. Enke, N. Kuhl, M. Klein, J. Vitz, S. Gräfe, B. Dietzek, M. Schmitt, J. Popp, U. S. Schubert, **M. D. Hager**, “Intrinsic self-healing polymers with high E-modulus based on dynamic reversible urea bonds”, *NPG Asia Mater.* **2017**, 9, e420.
- J. Ahner, M. Micheel, R. Geitner, M. Schmitt, J. Popp, B. Dietzek, **M. D. Hager**, Self-healing functional polymers: Optical property recovery of conjugated polymer films by uncatalyzed imine metathesis, *Macromolecules* **2017**, 50, 3789-3795.

### 1) **General Information**

**Popp, Jürgen**, Prof. Dr.

Friedrich Schiller University, Jena, Institute of Physical Chemistry (IPC) and Abbe Center of Photonics (ACP), Helmholtzweg 4, 07743 Jena

Tel.: 03641-948320; e-mail: juergen.popp@uni-jena.de

and Leibniz Institute of Photonic Technology (Leibniz-IPHT), Albert-Einstein-Str. 9, 07745 Jena

Tel.: 03641-206300; e-mail: juergen.popp@ipht-jena.de

Professor (W3), Institute Director of IPC and scientific director Leibniz-IPHT

4 children (24 / 22 / 20 / 19)

### 2) **University education with degree**

Diploma in chemistry, University of Würzburg, physical chemistry (03/1992)

Study of chemistry, University of Würzburg (10/1989-03/1992)

Study of chemistry (undergraduate), University of Erlangen-Nürnberg (10/1986-09/1989)

### 3) **Scientific degrees**

Venia legendi in chemistry, University Würzburg (02/2000)

Habilitation in physical chemistry, University Würzburg (01/1997-02/2000; mentor Prof. Dr. Wolfgang Kiefer)

PhD in chemistry, University of Würzburg (02/1995; supervisor Prof. Dr. Wolfgang Kiefer)

PhD studies, University of Würzburg (03/1992-02/1995; supervisor Prof. Dr. Wolfgang Kiefer)

### 4) **Professional career since final degree**

04/2002 – to date      Professor (W3), FSU Jena

04/2006 – to date      Scientific Director Leibniz Institute of Photonic Technology

1997-2002              Research associate, University of Würzburg, Institute of Physical Chemistry

1996                    Postdoc, Department of Applied Physics, Yale University, New Haven, USA (supervisor Prof. Dr. Richard Kounai Chang)

### 5) **Others**

#### Prices and honors:

Third prize of the Berthold Leibinger Innovationspreis (2018)

Ioannes Marcus Marci Medal of the Czechoslovak Spectroscopy Society (2018)

Election to the American Institute for Medical and Biological Engineering (AIMBE)

College of Fellows (2016)

Pittsburgh Spectroscopy Award (2016)

Robert-Kellner-Lecture Award (2013)

Research Award for Applied Sciences of the Free State of Thuringia, Germany (2013)

Awarding honorary doctor's degree at Babes-Bolyai University Cluj-Napoca (2012)

Fellow of the International Society for Optical Engineering (SPIE, 2012)

Guest professor Wuhan University, China (2011-)

Fellow of the Society for Applied Spectroscopy (2009)

Call for chair of Physical Chemistry (W3) at the University of Würzburg (2006, declined)

Bunsen-Kirchhoff Award by the German Bunsen-Society (2002)

Cooperation Prize of the University of Würzburg (2001)

Zehetmaier Award (Habilitation scholarship) awarded by the Freistaat Bayern (1997)

DFG Research scholarship (1996)

Award of the Faculty for Chemistry and Pharmacy, University of Würzburg (1994)

Editorial duties and membership advisory boards:

Member of the editorial advisory board of:

Journal of Biophotonics (Editor-in-Chief and founding editor), J. Raman Spectrosc. (associate editor), Scientific Reports, Analytical and Bioanalytical Chemistry, Analytical Chemistry

Member Scientific Advisory Council FIZ Karlsruhe - Leibniz Institute for Information Infrastructure (2018-)

Member and chairman of the university council of the University of Applied Sciences Jena, Germany (2012-)

Member Board of Directors "Abbe Center of Photonics" (2011-)

Member Board of Directors "Zentrum für Medizinische Optik und Photonik" (2011-)

Member Board of Stakeholders European Technology Platform Photonics21 (2009-)

Coordinator of PHOTONICS4LIFE a European Network of Excellence for Biophotonics (2008-)

Member of the Board of Trustees of the "Stiftung für Technologie, Innovation und Forschung Thüringen (STIFT)" (2008-)

Member of the Board of Management of the „Wirtschaftsförderungsgesellschaft Jena mbH“ (2008-)

Member Federal Ministry of Education and Research (BMBF) program committee „Optical Technology“ (2007-)

Member of the scientific advisory board JENOPTIK AG (2007-)

Vice dean of the School of Chemical and Earth Sciences, FSU Jena (2005-2007)

Member of the faculty board, School of Chemical and Earth Sciences, FSU Jena (2003-)

Coordinator of the main research framework "Biophotonic" supported by the German Ministry of Education and Research (BMBF) (2002-)

**6) Publications – in total > 800 referred publications, 16877 citations, h-index 58**

Cialla-May D, Zheng X-S, Weber K, Popp J\* (2017) Recent progress in surface-enhanced Raman spectroscopy for biological and biomedical applications: from cells to clinics. Chemical Society Reviews 46: 3945-61.

Krafft C, Schmitt M, Schie IW, Cialla-May D, Matthaeus C, Bocklitz T, Popp J\* (2016) Label-free molecular imaging of biological cells and tissues by linear and non-linear Raman spectroscopic approaches, Angew. Chem. Int. Ed., 56, 4392-4431.

Krafft C, Schie IW, Meyer T, Schmitt M, Popp J\* (2016) Developments in spontaneous and coherent Raman scattering microscopic imaging for biomedical applications, Chem. Soc. Rev., 45, 1819– 1849.

Berry D, Mader E, Lee TK, Woebken D, Palatinszky M, Schmid MC, Hanson BT, Wang Y, Zhu D, Schintlmeister A, Wagner M, Shterzer N, Mizrahi I, Rauch I, Decker T, Bocklitz T, Popp J, Gibson CM, Fowler PW, Huang WE (2015) Tracking heavy water (D2O) incorporation for identifying and sorting active microbial cells. Proc. Natl. Acad. Sci. U S A, 112, E194-203.

Press AT, Traeger A, Pietsch C, Mosig A, Wagner M, Clemens MG, Jbeily N, Koch N, Gottschaldt M, Beziere N, Ermolayev V, Ntziachristos V, Popp J, Kessels MM, Qualmann B, Schubert US, Bauer M (2014) Cell type-specific delivery of short interfering RNAs by dye-functionalised theranostic nanoparticles. Nature Commun. 5, 1-13.

Hölscher D, Dhakshinamoorthy S, Alexandrov T, Becker M, Bretschneider T, Buerkert A, Crecelius AC, De Waele D, Eisen A, Heckel DG, Heklau H, Hertweck C, Kai M, Knop K, Krafft C, Maddula RK, Matthaeus C, Popp J, Schneider B, Schubert US, Sikora RA, Svatos A, Swennen RL (2014) Phenalenone-type phytoalexins mediate resistance of banana plants (Musa spp.) to the burrowing nematode Radopholus similis. Proc. Natl. Acad. Sci. U S A, 111, 105-110.

Vargas Jentzsch P, Ciobota V, Rösch P, Popp J\* (2013) Reactions of alkaline minerals in the atmosphere. Angew. Chem. Int. Ed., 52, 1410-1413.

Stöckel S, Meisel S, Elschner M, Rösch P, Popp J\* (2012) Raman-spectroscopic detection of Anthrax endospores in hoax material. Angew. Chem. Int. Ed., 51, 5339-5342.

Mappes T, Jahr N, Csaki A, Vogler N, Popp J, Fritzsche W (2012) The Invention of Immersion Ultramicroscopy in 1912-The Birth of Nanotechnology?. Angew. Chem. Int. Ed., 51, 11208-11212.

Recknagel P, Gonnert FA, Westermann M, Lambeck S, Lupp A, Rudiger A, Dyson A, Carre JE, Kortgen A, Krafft C, Popp J, Sponholz C, Fuhrmann V, Hilger I, Claus RA, Riedemann NC, Wetzker R, Singer M, Trauner M, Bauer M (2012) Liver dysfunction and phosphatidylinositol-3-kinase signalling in early sepsis: Experimental studies in rodent models of peritonitis. PLoS Med., 9, e1001338.