

**3rd Sino-German Symposium on
Singlet Molecular Oxygen and Photodynamic Effects**

第三届中国德单线态氧及其光动力效应

学术研讨会



3rd Sino-German Symposium on Singlet Molecular Oxygen and Photodynamic Effects

Sponsored by

Sino-German Center for Research Promotion,

National Natural Science Foundation of China
and Deutsche Forschungsgemeinschaft



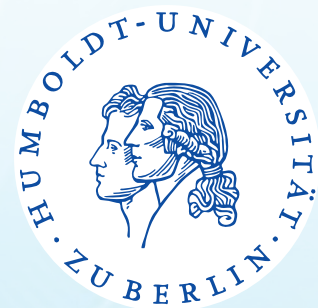
Organized by

Key Laboratory of OptoElectronic Science and Technology
for Medicine of Ministry of Education

Fujian Provincial Key Laboratory for Photonics Technology
Fujian Normal University, P.R. China



AG Photobiophysics, Institute of Physics
Humboldt University of Berlin, Germany



Program

8 April, 2019: Registration Hyatt Regency Fuzhou Cangshan		
9 April, 2019 Hongda Hall, Fujian Normal University		
8:20-8:30	Group Photo for Symposium	
8:30-8:55	Opening Ceremony Chair: <i>Buhong Li</i>	
	Changping Wang	President of Fujian Normal University
	Bode Lin	Deputy Director of Fujian Provincial Department of Science and Technology
	Karin Zach	Director of Sino-German Center for Research Promotion
	Beate Röder	Humboldt-Universität zu Berlin
8:55-9:15	Introduction to Sino-German Center for Research Promotion Chair: <i>Beate Röder</i>	
	Baiyu Zhang	Deputy Director of Sino-German Center for Research Promotion
Session 1	Singlet oxygen generation and detection Chairs: <i>Wolfgang Bäumlér, Pengfei Wang</i>	
9:15-9:40	Steffen Hackbarth PDT-induced anoxia <i>in vivo</i> and possible consequences for the treatment strategy	Humboldt- Universität zu Berlin, Institut für Physik
9:40-10:05	Huiyun Lin Quenching effects of EGCG for Singlet oxygen generation	School of Photonics and Electronic Engineering, Fujian Normal University
10:05-10:30	Martina Meinke Formation of reactive oxygen species during the application of photosensitizers	Charité – Universitätsmedizin Berlin, Klinik für Dermatologie, Venerologie und Allergologie, Bereich Hautphysiologie
10:30-10:50	Coffee Break	
10:50-11:15	Beate Röder Time-resolved singlet oxygen luminescence detection <i>in vivo</i>	Humboldt- Universität zu Berlin, Institut für Physik
11:15-11:40	Wolfgang Bäumlér Antimicrobial PDT on surfaces and in liquids	Klinik und Poliklinik für Dermatologie, Universität Regensburg
11:40-12:05	Michael Köhl Singlet oxygen and hydrogen bonds in water	Div. PV-Modules, Systems and Reliability Fraunhofer-Institut für Solare Energiesysteme ISE
12:05-13:20	Lunch Break	
	Visit Gallery of University History	

Program

Session 2	Photosensitizers and targeting carrier systems Chairs: <i>Maurício S. Baptista, Daxiang Cui</i>	
13:30-13:55	Thomas Gensch Flavin-binding fluorescent proteins as photosensitizers: Quantification of phototoxicity in bacteria and mammalian cells	Institut für Komplexe Systeme 4, Zelluläre Biophysik
13:55-14:20	Xiaochen Dong Organic NIR photosensitizers for targeted cancer phototherapy	Institute of Advanced Materials, Nanjing Tech University
14:20-14:45	Mingdong Huang Antimicrobial mechanism and applications of phthalocyanine type photosensitizer	College of Chemistry, Fuzhou University
14:45-15:10	Georg Daeschlein Cold plasma photodynamic therapy in the treatment of dermatologic diseases	Department of Dermatology, University of Greifswald
15:10-15:35	Coffee Break	
Session 3	Photosensitizers and targeting carrier systems Chairs: <i>Steffen Hackbarth, Junle Qu</i>	
15:35-16:00	Daxiang Cui pH-responsive gold nanoclusters-based nanoprobes for lung cancer targeted near-infrared fluorescence imaging and chemophotodynamic therapy	Institute of Nano Biomedicine and Engineering, Shanghai Jiao Tong University
16:00-16:25	Pengfei Wang Water-Soluble polythiophene for two-photon excitation fluorescence imaging and photodynamic therapy of cancer	Technical Institute of Physics and Chemistry, Chinese Academy of Sciences
16:25-16:50	Yueqing Gu Photodynamic therapy in deep tissue based on upconversion nanomaterials	School of Engineering, China Pharmaceutical University
16:50-17:15	Jianzhang Zhao Preparation of heavy atom-free photosensitizers and its application in photodynamic therapy	State Key Laboratory of Fine Chemicals, Dalian University of Technology
17:15-17:40	Jiandong Huang New application of phthalocyanine molecules: from photodynamic therapy to photothermal therapy	College of Chemistry, Fuzhou University
17:40-18:00	Round table discussions	
19:00-20:30	Dinner	

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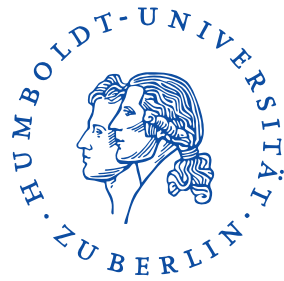
10 April, 2019		
Session 4	Photodynamic inactivation of microorganisms Chairs: Annegret Preuß, Xiaochen Dong	
8:30-8:55	Dagmar Waberski Photodynamic decontamination of semen from breeding animals	Stiftung Tierärztliche Hochschule Hannover Reproduktionsmedizinische Einheit der Kliniken
8:55-9:20	Dan Zhu Photodynamic opening of blood-brain barrier to high weight molecules and liposomes through optical clearing skull window	Huazhong University of Science and Technology
9:20-9:45	Fengting Lv Intracellular assembly of anticancer drugs specifically in cancer cells for enhancing drug efficacy	Key Laboratory of Organic Solids, Institute of Chemistry, Chinese Academy of Sciences
9:45-10:10	Tymish Y. Ohulchanskyy Nanoparticles with controlled excitation dynamics to enhance photodynamic therapy efficiency	College of Optoelectronic Engineering, Shenzhen University
10:10-10:35	Coffee Break	
10:35-11:00	Annegret Preuß Photodynamically induced death of mosquito larvae	Humboldt- Universität zu Berlin, Institut für Physik
11:00-11:25	Zhiyu Qian Real-time efficacy assessment technology of tumor microwave thermal ablation	College of Automation Engineering, Nanjing University of Aeronautics and Astronautics
11:25-11:50	Ying Wang <i>In vitro</i> photodynamic antimicrobial activity of cationic benzylidene cyclopentanone photosensitizers against Helicobacter pylori	Department of Laser Medicine, Chinese PLA General Hospital
12:00-13:30	Lunch Break	
Section 5	Singlet oxygen mediated photodynamic effects Chairs: Ronald Sroka, Guangjun Nie	
13:30-13:55	Liwei Liu Monitoring of tumor microenvironment based on fluorescence lifetime microscopy	College of Optoelectronic Engineering, Shenzhen University
13:55-14:20	Buhong Li Enhanced singlet oxygen generation for photodynamic therapy	School of Photonics and Electronic Engineering, Fujian Normal University
14:20-14:45	Tongsheng Chen Spectral wide-field microscopic fluorescence resonance energy transfer imaging in live cells	College of Biophotonics, South China Normal University
14:45-15:10	Judith Pohl Influences of PDI on the formation of phototrophic aeroterrestrial biofilms	Humboldt- Universität zu Berlin, Institut für Physik
15:10-15:30	Coffee Break	

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Session 6	PDT- general Aspects Chairs: Georg Däschlein, Yueqing Gu	
15:30-15:55	Guangjun Nie Biomedical nanorobots for PPT treatment of cancer	National Center for Nanoscience and Technology, China
15:55-16:20	Adrian Rühm Light dosimetry in the brain	Laser-Forschungslabor / LIFE-Zentrum Klinikum der Universität München Campus Großhadern
16:20-16:45	Zhihua Ding Structural and functional optical coherence tomography and its applications	State Key Lab of Modern Optical Instrumentation, Zhejiang University
16:45-17:10	Peng Huang Photodynamic theranostics	Health Science Center, Shenzhen University
17:10-17:35	Sora Jung Application of PDT in dermatologic patient care	Charité – Universitätsmedizin Berlin, Klinik für Dermatologie, Venerologie und Allergologie Bereich Hautphysiologie
17:35-18:00	Alexander Greer Singlet oxygen-based photodynamic therapy using a phase-separated sensitization method	Department of Chemistry, City University of New York
18:00-19:00	Round-table discussions	
19:00-20:30	Dinner	
11 April, 2019		
Session 7	PDT-new approaches Chairs: Martina Meinke, Ying Gu	
8:30-8:55	Ying Gu Improvement of antitumor efficacy for 5-ALA-PDT through modulating mitochondrial morphology Study of enhanced transport through confined channels using optical tweezers and microfluidics	Department of Laser Medicine, Chinese PLA General Hospital
8:55-9:20	Junle Qu Nanobiophotonics for theranostic applications	College of Optoelectronic Engineering, Shenzhen University
9:20-9:45	Ronald Sroka Fluorescence diagnostic and PDT in neurosurgery	Ludwig-Maximilians-Universität München
9:45-10:10	Gang Liu Bioinspired theranostics: a strategic approach in cancer research and therapy	School of Public Health, Xiamen University
10:10-10:35	Coffee Break	

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Session 8	Optical techniques in PDT applications Chairs: <i>Thomas Gensch, Mingdong Huang</i>	
10:35-11:00	Zhenxi Zhang Nanocomposite-based optical theranostic technologies for tumor	Institute of Biomedical Analytical Technology and Instrumentation, Xi'an Jiaotong University
11:00-11:25	Lothar Lilge Personalize photodynamic therapy treatment planning: photon, drug and oxygen distributions for conformal dose delivery	Department of Medical Biophysics, University of Toronto
11:25-11:50	Xiaolong Liu Tumor microenvironment activatable nanoreactor enabled cascade-amplify strategy for synergistic photodynamic therapy	Mengchao Hepatobiliary Hospital of Fujian Medical University
12:00-13:30	Lunch Break	
Session 9	Recent advances in clinical PDT Chairs: <i>Lothar Lilge, Zhihua Ding</i>	
13:30-13:55	Alexander Müller Electron beam functionalized microfiltration membranes for photodynamic inactivation of microorganisms	Humboldt- Universität zu Berlin Institut für Physik
13:55-14:20	Haixia Qiu Application of optical coherence tomography angiography in photodynamic therapy	Department of Laser Medicine, Chinese PLA General Hospital
14:20-14:45	Xiuli Wang Enhancement of photodynamic therapy for Bowen's disease using plum-blossom needling to augment drug delivery	Shanghai Skin Disease Hospital of Tongji University School of Medicine
14:45-15:10	Maurício S. Baptista Are membranes important targets for the outcome of PDT?	Instituto de Química, Universidade de São Paulo
15:10-15:30	Coffee Break	
15:30-16:00	Concluding Remarks – aspects of future collaboration Chairs: <i>Beate Röder, Buhong Li</i>	
16:00-17:00	Leave Hyatt Hotel and Check in at Yongtai Smiler Hotspring Hotel	
18:00-20:00	Dinner	
12 April, 2019		
9:00-16:00	Local visiting and scientific discussion	
16:30-17:30	Leave Yongtai City and Check in at Juchunyuan Exhibition Hotel	
18:00-20:00	Dinner	
13 April, 2019: Departure day		



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