

**7<sup>th</sup> SFB/TRR 142 Workshop**  
**“Tailored Nonlinear Photonics”**  
**as Video-Online Workshop**



<b>September, Monday 28, 2020</b>	
<b>9:00</b>	<b>Welcome</b>
<b>Session 1: Chairperson: Thomas Zentgraf</b>	
9:10	Invited Talk: Rachel Grange Title: Quadratic Nanomaterials for Nonlinear Integrated Photonic Devices
10:10	David Hähnel (C05) Design and optimization of nonlinear dielectric holographic meta surfaces
<b>10:30</b>	<b>Coffee break and free discussion time</b>
<b>Session 2: Chairperson: Polina Sharapova</b>	
10:40	Alessandro Ferreri (C02) Integrated SU(1,1) interferometer
11:00	Carolin Lüders (C01) Frequency conversion for time-resolved spectroscopy
11:20	Agnieszka Kozub (B04) Polaron-induced giant optical nonlinearities in lithium niobate
11:40	Christof Eigner (B05) Fabrication and characterization of tailored nonlinear waveguides for quantum optical applications
<b>12:00</b>	<b>Lunch break 2 h</b>
<b>Session 3: Chairperson: Marc Aßmann</b>	
14:00	Dustin Siebert (C04) Optoelectronic simulation of rapid adiabatic passage in single quantum dots with electrically induced chirp
14:20	Björn Jonas (A03) Cavity enhanced two-photon physics with semiconductor quantum dots
14:40	Laura Krauss-Kodytek, Wolf-Rüdiger Hannes (A07) Non-Degenerate Two-Photon Absorption in Bulk Semiconductors: Theory and Experiment
15:00	Michal Kobecki (A06) A new paradigm for ultrafast acoustics: drastic miniaturization and resonant phonon driving
15:20	<b>Coffee break free discussion time</b>
<b>Session 4: Chairperson: Artur Zrenner</b>	
15:40	Jan Mundry (B02) Plasmonic enhancement of SHG/THG from hexagonal GaN/AlN multi-quantum wells by gold nano-antennas
16:00	Invited Talk: Isabelle Staude Title: Tailoring Nonlinear Interactions with Semiconductor Metasurfaces

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<b>September, Tuesday 29, 2020</b>	
<b>9:00</b>	<b>Welcome</b>
<b>Session 5: Chairperson: Tim Bartley</b>	
9:10	Invited talk: Wolfram Pernice Title: Phase-change photonic neuromorphic computing
10:10	Matvei Ryabinin (C06) Generating two-mode squeezing and Schrödinger cat states with multimode measurement-induced nonlinearity
<b>10:30</b>	<b>Coffee break</b>
<b>Session 6: Chairperson: Claudia Ruppert</b>	
10:40	Hendrik Rose (A02) Accurate photon echo timing by optical freezing of exciton dephasing and rephasing in quantum dot ensembles
11:00	Mirko Cinchetti (A08) A combined magneto-optical and photoemission spectroscopy setup for the characterization of 2D materials
11:20	Maximilian Albert (B01) Optical temperature Management for high-quality ZnO MBE
<b>11:40</b>	<b>Lunch break 1 h 20 min</b>
<b>Session 7: Chairperson: Stefan Schumacher</b>	
13:00	Bernd Berger (A04) Vortex switching in polariton condensates
13:20	Invited Talk: Alexander Steinhoff Title: Dynamics of photoexcited carriers in atomically thin transition metal dichalcogenide semiconductors
<b>14:20</b>	<b>Concluding remarks</b>