Probing Soot Formation and Chemical Evolution During Combustion [STh4L.1]
Author(s): Hope A. Michelsen; Sandia National Labs, USA.
There are gaps in the understanding of soot formation during combustion, which are largely attributable to a limited ability to probe relevant particle parameters during formation. This talk will describe approaches to developing appropriate diagnostics.

Presentations and Posters

Monday 14 May 16:00-18:00

FM4E PT-Symmetry and Non-Hermitian Photonics
(Executive Ballroom 210E)

PT-Symmetric Microring Laser Gyroscope [FM4E.5]
Author(s): Jinhan Ren1, Gal Harari2, Absar U. Hassan3, Weng Chow3, Mohammad Soltani2, Mohammad Parvinnezhad Hakimabad4, Demetrios N. Christodoulides1, Mercede Khajavikhan1; 1CREOL UCF, USA; 2Physics Dept. and Solid State Inst., Technion, Israel; 3Sandia National Labs, USA; 4Raytheon BBN Technologies, USA.

Wednesday 16 May 11:30-13:00

JW2A Poster Session II
(Exhibition Hall)

Terahertz Antireflection Metasurfaces and Application in Narrow Bandpass Filters [JW2A.84]
Author(s): Hou-Tong Chen1, Chun-Chieh Chang1, Li Huang2, John Nogan3; 1Los Alamos National Lab, USA; 2Harbin Inst. of Technology, China; 3Sandia National Labs, USA.

Wednesday 16 May 17:00-19:00

FW4H Shaping Emission Using Metasurfaces
(Executive Ballroom 210H)

Optical Power Limiting from Plasmonic Metasurfaces Coupled to Intersubband Transitions [FW4H.5]
Author(s): Nishant Nookala1, Peter Chang1, Dimitrios Sounas1, Omri Wolf2, Stephen March1, Seth Bank1, Igal Brener1, Andrea Alù2, Mikhail A. Belkin1; 1Univ. of Texas at Austin, USA; 2School of Electrical and Computer Engineering, Ulsan National Inst. of Science and Technology, South Korea; 3Sandia National Labs, USA.

16 May • 6:00 pm
Wednesday 16 May 17:00-19:00

FW4H Shaping Emission Using Metasurfaces
(Executive Ballroom 210H)

Shaping InAs quantum dot photoluminescence using GaAs nanoresonator arrays [FW4H.8]
Author(s): Aleksandr Vaskin¹, Sheng Liu², Matthias Zilk³, Benjamin Leung⁴, Miao-Chan Tsai⁵, Yuanmu Yang⁶, Polina Vabishchevich⁶, Xiaowei He⁷, Younghee Kim⁵, Nicolai F. Hartmann⁶, Sadhvikas Addamane⁶, Gordon A. Keeler⁷, George Wang⁸, Han Htoon⁵, Stephen Doorn⁹, Ganesh Balakrishnan⁵, Thomas Pertsch¹, Michael Sinclair¹, Igal Brener⁴, ¹, Isabelle Staude¹, Stefano Fasold¹; ¹Inst. of Applied Physics, Friedrich Schiller Univ., Germany; ²Sandia National Labs, USA; ³Center for Integrated Nanotechnologies, Los Alamos National Lab, USA; ⁴Center for High Technology Materials, Univ. of New Mexico, USA; ⁵Center for Integrated Nanotechnologies, Sandia National Labs, USA.

Thursday 17 May 14:00-16:00

ATh3H Control of Quantum Optical and Opto-mechanical Systems
(Executive Ballroom 210H)

Spectral Tuning of Multiple Germanium Vacancy Centers in Diamond with Mechanical Strain [ATh3H.3]
Author(s): Smarak Maity¹, Linbo Shao¹, Young-Ik Sohn¹, Srujan Meesala¹, Bartholomeus J. Machielse¹, Edward Bielejec¹, Marko Loncar¹; ¹Harvard Univ., USA; ²Sandia National Labs, USA.

Thursday 17 May 16:30-18:30

FTh4M Functional Nanophotonics Using Metasurfaces
(Marriott Salon III)

Active Tuning of Reflectance at Long Infrared Wavelengths using Strongly Coupled Metasurface-Semiconductor Hybrid Structures [FTh4M.1]
Author(s): Raktim Sarma¹, Salvatore Campione¹, Michael goldflam², Joshua Shank³, Sean Smith³, Jinhyun Noh³, Peide Ye³, Michael Sinclair³, Igal Brener³; ¹Sandia National Labs, USA; ²Purdue Univ., USA;

FTh4J Random and Alternative Materials Metasurfaces
(Meeting Room 212A/C)

III-V semiconductor metasurface as the optical metamixer [FTh4J.4]
Author(s): Polina Vabishchevich¹, Sheng Liu¹, Aleksandr Vaskin², John Reno²,³, Gordon A. Keeler¹, Michael Sinclair², Isabelle Staude³, Igal Brener³; ¹Sandia National Labs, USA; ²Inst. of Applied Physics, Abbe Center of Photonics, Friedrich-Schiller-Univ. Jena, Germany; ³Center for Integrated Nanotechnologies, Sandia National Labs, USA.

Friday 18 May 10:30-12:30

SF2I Electrooptic and Nanophotonic Materials
(Meeting Room 211 B/D)

Foundry-compatible Hybrid Silicon / Lithium Niobate Electro-Optic Modulator [SF2I.4]
Author(s): Peter Weigel¹, Jie Zhao¹, Douglas Trotter¹, Dana Hood², John Mudrick², Christina Dallol², Andrew Pomerene², Andrew Starbuck², Christopher DeRose³, Anthony Lentine³, Shayan Mookherjea¹; ¹Univ. of California San Diego, USA; ²Applied Microphotonic Systems, Sandia National Labs, USA.

Friday 18 May 14:00-16:00

FF3D Spectroscopy of Low Dimensional Systems
(Executive Ballroom 210D)

Selective Observation of Nonradiative Electronic States in Silicon-Vacancy Centers in Diamond [FF3D.1]
Author(s): Christopher L. Smallwood¹, Matthew W. Day¹, Travis Autry²,³, Geoffrey M. Diederich¹, Ronald Ulbricht²,³, Tim Schröder², Edward Bielejec³, Mark E. Siemens³, Steven T. Cundiff¹,²; ¹Physics, Univ. of Michigan, USA; ²JILA, Univ. of Colorado / NIST, USA; ³Physics, Univ. of Colorado, USA; ⁴Physics and Astronomy, Univ. of Denver, USA; ⁵Electrical Engineering and Computer Science, MIT, USA; ⁶Sandia National Labs, USA.

SF3G Quantum Cascade Lasers
(Executive Ballroom 210G)

Surface-Emitting Terahertz Quantum-Cascade Laser with 170 mW Output Power in a Single Lobed Beam [SF3G.6]
Author(s): Yuan Jin¹, Liang Gao¹, Ji Chen¹, Chongzhao Wu¹, John Reno², Sushil Kumar¹; ¹Lehigh Univ., USA; ²Sandia National Labs, USA.

16 May • 6:45 pm

17 May • 2:30 pm

17 May • 4:30 pm

17 May • 5:15 pm

18 May • 11:15 pm

18 May • 14:00 pm

18 May • 15:30 pm