We numerically demonstrate how to obtain topological lasing from a uniformly pumped topological array of optical cavities, by exploiting the naturally frequency-dependent gain that stems from light-matter interaction on a single site.

We report on the development of a compact optical standard using the rubidium two-photon transition. The physics package has a volume of 35cm³, consumes ~500mW of power and demonstrates a fractional frequency instability of 1x10⁻¹³.

We numerically demonstrate how to obtain topological lasing from a uniformly pumped topological array of optical cavities, by exploiting the naturally frequency-dependent gain that stems from light-matter interaction on a single site.

Oral PD-2.4 19:30 ROOM 13b ICM Topological lasers generating and multiplexing orbital angular momentum on demand — •Boubacar Kante — University of California Berkeley, Berkeley, USA

We report the first room temperature integrated topological lasers directly generating and multiplexing coherent beams carrying arbitrarily large orbital angular momenta (OAM).

We numerically demonstrate how to obtain topological lasing from a uniformly pumped topological array of optical cavities, by exploiting the naturally frequency-dependent gain that stems from light-matter interaction on a single site.

Oral PD-2.5 19:40 ROOM 13b ICM Harper-Hofstader Topological Laser with Frequency-Dependent Gain — •Matteo Secci and Iacopo Carusotto — 1International School for Advanced Studies (SISSA), Trieste, Italy — 2INO-CNR BEC Center and Dipartimento di Fisica, Università di Trento, Trento, Italy

We report the first experimental demonstration of chip-to-chip teleportation of quantum states of light. Integrated quantum transceivers in silicon are able to prepare, manipulate, distribute and transceive quantum photonic states with high fidelity.

Oral PD-2.6 19:50 ROOM 13b ICM Chip-scale optical standard with 2x10⁻¹² stability — •Zachary Newman¹, Martin Wimmer¹, Arstan Bisanov², Roberto Morandotti², and Ulf Peschel³ — ¹Institute of Solid-State Physics and Optics, Friedrich Schiller University Jena, Jena, Germany — ²Institut National de la Recherche Scientifique–EMT, Montreal, Canada

Oral PD-2.7 20:00 ROOM 13b ICM PT-symmetry in Two Synthetic Dimensions — •Andre Luiz Marques Muniz¹, Martin Wimmer¹, Arstan Bisanov², Roberto Morandotti², and Ulf Peschel³ — ¹Institute of Solid-State Physics and Optics, Friedrich Schiller University Jena, Jena, Germany — ²Institut National de la Recherche Scientifique–EMT, Montreal, Canada

Oral PD-2.8 20:10 ROOM 13b ICM Multistability-Enabled Composite Soliton and Soliton Collision in a Bichromatically-Pumped Microresonator — •Wenle Weng, Romain Bouchard, and Tobias Kippenberg — Swiss Federal Institute of Technology Lausanne, Lausanne, Switzerland

We numerically demonstrate how to obtain topological lasing from a uniformly pumped topological array of optical cavities, by exploiting the naturally frequency-dependent gain that stems from light-matter interaction on a single site.

Oral PD-2.9 20:20 ROOM 13b ICM Observation of exceptional points in passive plasmonic nanostructures — •Boubacar Kante, Junhee Park, and Abdoulaye Ndao — University of California Berkeley, Berkeley, USA

We propose a novel approach to exceptional points (EPs) and report their first observation in plasmonics at room temperature. The new platform is shown to enable attomolar immuno-assay nanosensing.

We numerically demonstrate how to obtain topological lasing from a uniformly pumped topological array of optical cavities, by exploiting the naturally frequency-dependent gain that stems from light-matter interaction on a single site.

We numerically demonstrate how to obtain topological lasing from a uniformly pumped topological array of optical cavities, by exploiting the naturally frequency-dependent gain that stems from light-matter interaction on a single site.