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## **[412] Towards tunable room-temperature condensation in a polariton Su-Schrieffer–Heeger (SSH) chain**

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Strong coupling of a cavity photon to an exciton in semiconductors leads to the formation of exciton-polaritons, light-matter quasiparticles that can undergo Bose-Einstein condensation (BEC). Patterning a length-tunable cavity by Focused Ion Beam milling allows engineering potential landscapes to trap these condensates and emulate different Hamiltonians. Here, we investigate a 1D polariton lattice with alternating coupling strengths, a so-called Su-Schrieffer–Heeger chain. Atomic Force Microscopy has been used to examine the structures, continued by optical characterization, indicating the formation of topological edge states in the lattice. Furthermore, we discuss our progress on demonstrating selective condensation in different lattice modes.

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