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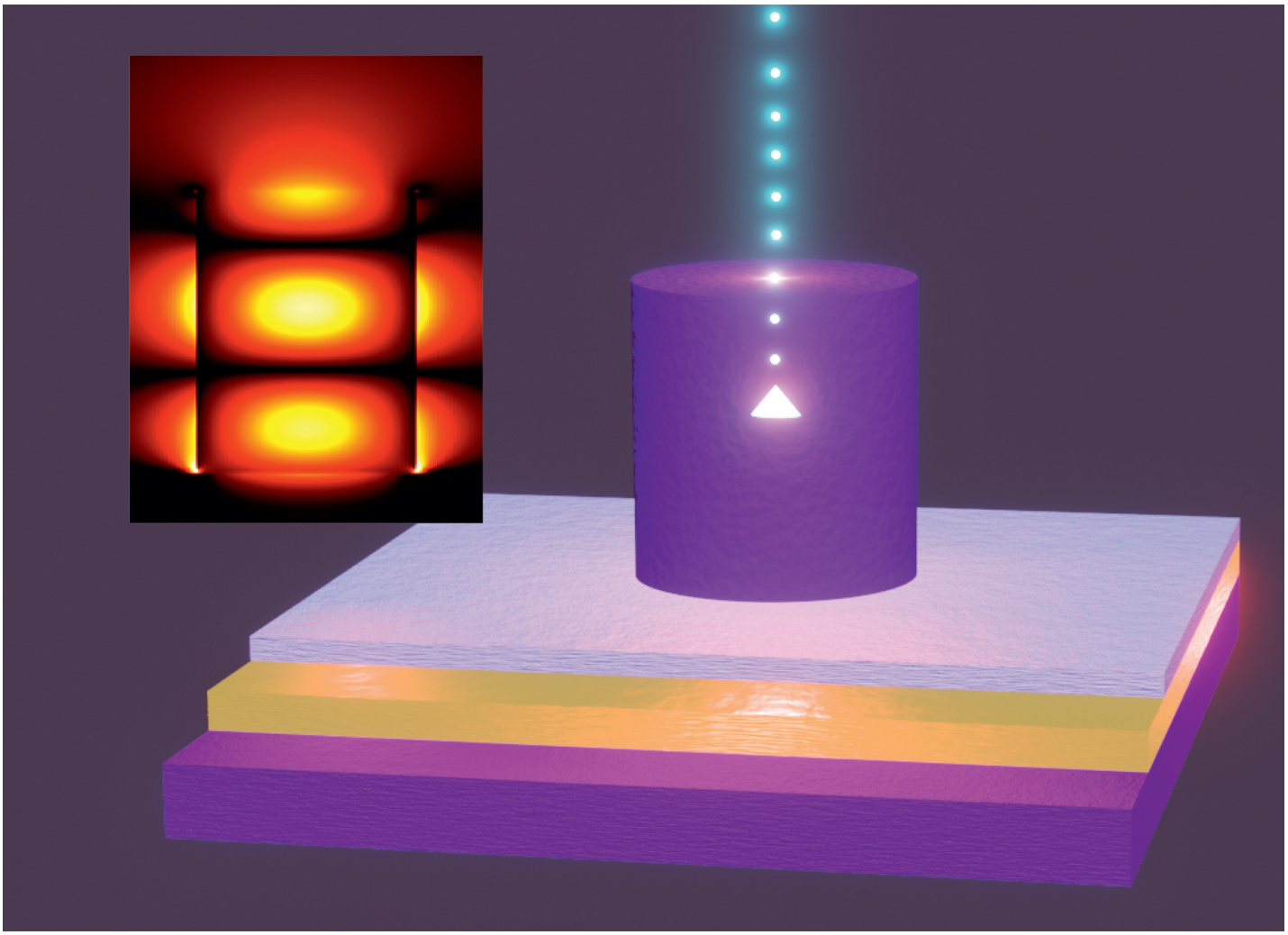
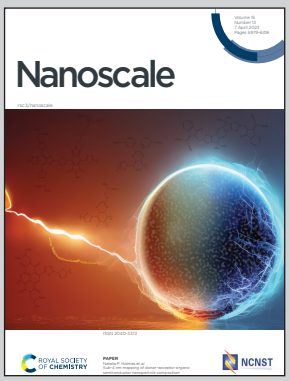


Showcasing research from a collaboration between DTU Electro, Department of Electrical and Photonics Engineering at the Technical University of Denmark and the Quantum Photonics, Electronics and Engineering Laboratory at CEA Grenoble, France.

Performance of the nanopost single-photon source: beyond the single-mode model

Despite its geometrical simplicity, the nanopost single-photon source based on a InGaAs quantum dot in a GaAs cylinder exhibits surprisingly high collection efficiency due to beneficial scattering into radiation modes. Consequently, a standard single-mode Fabry–Pérot model is insufficient to describe the device performance. Furthermore, the scattering mechanism decouples the collection efficiency from the Purcell enhancement, such that maximum collection efficiency is obtained off-resonance.

As featured in:



See Niels Gregersen *et al.*, *Nanoscale*, 2023, **15**, 6156.

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