

Anuja Padhye

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Research Experience

Post-doctoral research fellow January, 2021-present
Project title: Optical memristors based on chalcogenide whispering gallery mode cavities
[Institute of Electronic Structure and Laser \(IESL\)](#), Heraklion, Crete, Greece.

ITN Marie-Curie doctoral fellow 2016-2020
Thesis title: Novel continuous-wave infrared parametric sources
and noise analysis of infrared upconversion detectors
[ICFO - The Institute of Photonic Sciences](#), Castelldefels (Barcelona), Spain.

Charpak Research Internship Program June-September, 2015
Project title: Intensity and phase noise study of dual-frequency vertical external
cavity surface emitting laser and development of an optical parametric oscillator
[Laboratoire Aimé Cotton](#), Orsay, France.

Master's thesis 2014-2015
Thesis title: Random lasing over Anderson localized states in a
quasi-one-dimensional disordered microstructure
[Tata Institute of Fundamental Research](#), Mumbai, India.

Visiting Students' Research Program (VSRP) May-July, 2014
Project title: Aerosol based random lasers
[Tata Institute of Fundamental Research](#), Mumbai, India.

Education

Doctorate in Photonics 2016-2020
Polytechnic University of Catalonia, Spain.

M.Sc. Physics 2013-2015
Ramnarain Ruia College, University of Mumbai, India.

B.Sc. Physics 2010-2013
KET'S V. G. Vaze College, University of Mumbai, India.

Journal publications

K. Devi, **A. Padhye**, Sukeert, and M. Ebrahim-Zadeh, "Widely tunable room-temperature continuous-wave optical parametric oscillator based on periodically-poled KTiOPO₄," *Opt. Express* **27**, 24093-24104 (2019).

L. Meng*, **A. Padhye***, C. Pedersen, M. Ebrahim-Zadeh, and P. J. Rodrigo, "SHG(532 nm)-induced spontaneous parametric downconversion noise in 1064-nm-pumped IR upconversion detectors," *Opt. Lett.* **44**, 1670-1673 (2019).
(*equal contribution)

K. Devi, **A. Padhye**, P. G. Schunemann, and M. Ebrahim-Zadeh, "Multimilliwatt, tunable, continuous-wave, mid-infrared generation across 4.6-4.7 μm based on orientation-patterned gallium phosphide," *Opt. Lett.* **43**, 2284-2287 (2018).

Conference proceedings

K. Devi, **A. Padhye**, Sukeert, and M. Ebrahim-Zadeh, "Widely tunable, green-pumped, visible and near-infrared continuous-wave optical parametric oscillator based on fan-out-grating PPKTP," in 8th EPS-QEOD Europhoton Conference, paper WeM. 2.2.

K. Devi, **A. Padhye**, P. G. Schunemann, and M. Ebrahim-Zadeh, "Tunable, multi-milliwatt, continuous-wave difference-frequency-generation across 4.6-4.7 μm based on orientation-patterned GaP," paper JTU2A.67. (Poster at CLEO, San Jose, United States, 13-18 May 2018.)

K. Devi, **A. Padhye**, P. G. Schunemann, M. Ebrahim-Zadeh, "Continuous-wave, multi-milliwatt, tunable difference-frequency generation across 4608-4694 nm in orientation-patterned GaP," Proc. SPIE 10684, 1068410 (2018).

K. Devi, **A. Padhye**, P. G. Schunemann, and M. Ebrahim-Zadeh, "Tunable, continuous-wave, multi-milliwatt mid-infrared source across 4.6-4.7 μm based on orientation-patterned GaP," in High-Brightness Sources and Light-driven Interactions, OSA Technical Digest, paper MW1C.2.

Awards and fellowships

ITN Marie-Curie-Actions fellowship for doctoral training under Mid-TECH consortium, 2016-2020.

Charpak Research Internship scholarship awarded by French Embassy in India for research training in French laboratories, June-September 2015.

Academic scholarship for securing the 1st rank in KET'S V. G. Vaze College in the University Examination conducted during the academic year 2012-2013.

T. K. Kawale (Ozarkar) Endowment scholarship for outstanding performance in Physics subject during the academic years 2011-2012 & 2012-2013.

Fakruddin Adamally Endowment scholarship (2011-2012) for outstanding contribution in sports (Basketball).

T. N. Venkatesan Chemistry scholarship (2010-2011) of merit.

Outreach activities and public talks

[Outreach@ICFO](#), conducting visits for high school students and general public, 2016-2020.

[Evidyaloka](#), conducting online classes and hands-on science experiments for middle school students from Maharashtra, 2018-2020.

Presented my research work in '[3rd BCN Science Slam](#)' (European pre-final) at Bar Mau Mau, Barcelona, 31st May 2018.

Volunteered for lab tours during 'OSA Siegman International School on Lasers' held at ICFO, Castelldefels, 24-29 July 2016.

Conducted sky observation sessions as an assistant co-ordinator of [Amateur Astronomy Club](#), Mumbai, 2012-2015.

Delivered a lecture to undergraduates on "An introduction to tensors" as part of 'T³PL Series' at Ramnarain Ruia College, Mumbai, 19th July 2014.