CURRENT RESEARCH AND SCHOLARLY INTERESTS
Currently, I am working on an on-chip platform to simultaneously trap and manipulate micron scale beads and droplets with an intention to implement chemical reactions on a chip at ultrasmall volumes.

Publications

PUBLICATIONS

- On the substrate contribution to the back action trapping of plasmonic nanoparticles on resonant near-field traps in plasmonic films *OPTICS EXPRESS*
Punag Padhy, M. Zaman, P. Hansen, P. Hesselink, L.
2017; 25 (21): 26198–214

- Dielectrophoresis-assisted plasmonic trapping of dielectric nanoparticles *PHYSICAL REVIEW A*
M. A. Zaman, P. Padhy, P. C. Hansen, P. C. Hesselink, L.
2017; 95 (2)

- Adjoint method for estimating Jiles-Atherton hysteresis model parameters *JOURNAL OF APPLIED PHYSICS*
2016; 120 (9)

- Metal wire waveguide based all plasmonic refractive index sensor for terahertz frequencies *SENSORS AND ACTUATORS B-CHEMICAL*
Punag Padhy, P. Sahu, P. K. Jha, R.
2016; 225: 115-120