

Optical and thermophoretic forces on plasmonic particles

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I will present our results on utilizing optical, optothermal and thermophoretic effects for a series of nanophotonic applications such as printing, sensing and optically induced motion (1-5). Examples range from controlled laser printing with nanoscale precision via optically driven elevation of Janus particles to the direct optical monitoring of microfluidic flow generated by bacterial flagellar rotation.



Selected publications:

1. A. Ohlinger et al., Phys. Rev. Lett. **108**, 018101 (2012)
2. S. Kirchner et al., Appl. Phys. Lett. **104**, 9 (2014)
3. R. Schreiber et al, Nature Nanotechnology **9**, 74 (2014)
4. M. Li et al., Nano Lett. **15**, 770 (2015)
5. S. Nedev et al., ACS Photonics **2**, 491 (2015)