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Title:	Deciphering single- and multi-particle trapping dynamics under femtosecond pulsed excitation with simultaneous spatial and temporal resolution.
Authors:	Devi, Anita (/jspui/browse?type=author&value=Devi%2C+Anita) Yadav, Sumit (/jspui/browse?type=author&value=Yadav%2C+Sumit) De, Arijit K. (/jspui/browse?type=author&value=De%2C+Arijit+K.)
Keywords:	Deciphering single- and multi-particle femtosecond pulsed excitation spatial and temporal resolution
Issue Date:	2022
Publisher:	Springer Nature
Citation:	Scientific Reports, 12(1), 5373.
Abstract:	Recent theoretical and experimental studies have shed light on how laser trapping dynamics under femtosecond pulsed excitation are fine-tuned by optical and thermal nonlinearities. Here, we present experimental results of trapping of single and multiple polystyrene beads (of 1 μm diameter). We show how integration and synchronization of bright-field video microscopy with confocal detection of backscatter provide both spatial and temporal resolution required to capture intricate details of nonlinear trapping dynamics. Such spatiotemporal detection is promising to have far-reaching applications in exploring controlled laser trapping and manipulations harnessed by optical and thermal nonlinearities.
Description:	Only IISER Mohali authors are available in the record.
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