

July 5, 2023

Dear Editors,

We are pleased to submit a manuscript titled **‘Investigation of Multi-Angle Detection Schemes for Light Scattering of Optically Trapped Asymmetric Colloidal Particles’** P Parthasarathi, M Haw, L Lue, J Sefcik, and myself for publication as an article in Optical Communications.

This work introduces a new method to quantitatively characterize optically trapped colloidal particles, by measuring light scattered at multiple angles and analysing the data based on Bayesian inference. To demonstrate the method, we apply it estimate the instantaneous orientations of an optically trapped asymmetric colloidal dimer. This technique can be easily extended to characterize the size and shape of optically trapped colloidal particles and offers a powerful tool to study colloidal systems. The ability to interpret light scattering signals from an optically trapped entity should be of interest to readers of your journal.

We hope that you will consider our work for publication. If you need any further information or materials, please let me know. Thank you for your attention.

Sincerely yours,

Daniel Maciver

Department of Chemical and Process Engineering
University of Strathclyde
James Weir Building, 75 Montrose Street
Glasgow, G1 1XJ
United Kingdom

phone: +44-779-344-5441

fax: +44-779-344-5441

email: daniel.maciver.2016@uni.strath.ac.uk