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Title:	Can low power laser induce dimple on air-water interface?
Authors:	Verma, Gopal (/jspui/browse?type=author&value=Verma%2C+Gopal) Gaurav, Abhishek (/jspui/browse?type=author&value=Gaurav%2C+Abhishek) Nair, J. (/jspui/browse?type=author&value=Nair%2C+J.) Singh, K.P. (/jspui/browse?type=author&value=Singh%2C+K.P.)
Keywords:	Investigate Total-internal-reflection Fluid interfaces Optical force
Issue Date:	2013
Publisher:	OSA Publishing
Citation:	CLEO: QELS_ Fundamental Science, CLEO:QELS FS 2013
Abstract:	We investigate deformations of fluid interfaces caused by small ($\sim nN$) optical force of a low power laser beam under total-internal-reflection. For air-water interface deformations are undetectable, unlike recently claimed in ref. [3]. Using a critical fluid-fluid interface having weak surface tension large fluid-lens effects in the form of a bump are seen. Our observations support standard optofluidic force-balance with potential for technological applications.
URI:	https://www.osapublishing.org/abstract.cfm?URI=CLEO_AT-2013-JW2A.08 (https://www.osapublishing.org/abstract.cfm?URI=CLEO_AT-2013-JW2A.08) http://hdl.handle.net/123456789/2762 (http://hdl.handle.net/123456789/2762)
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