



Measurements of the third- and fifth-order optical nonlinearities of water at 532 and 1064 nm using the $D4\sigma$ method

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Auteur	Schnebelin, Côme [1], Cassagne, Christophe [2], de Araújo, Cid B [3], Boudebs, Georges [4]
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Résumé en anglais	The nonlinear response of liquid water was investigated at 1064 and 532 nm using a Nd:YAG laser delivering pulses of 17 ps and its second harmonic. The experiments were performed using the $D4\sigma$ method combined with the Z-scan technique. Nonlinear refractive indices of third- and fifth-order were determined, as well as the three-photon absorption coefficient, for both wavelengths. A good agreement was found between theory and experiment.
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- [1] [http://okina.univ-angers.fr/publications?f\[author\]=10457](http://okina.univ-angers.fr/publications?f[author]=10457)
- [2] <http://okina.univ-angers.fr/c.cassagne/publications>
- [3] [http://okina.univ-angers.fr/publications?f\[author\]=8609](http://okina.univ-angers.fr/publications?f[author]=8609)
- [4] <http://okina.univ-angers.fr/g.bou/publications>
- [5] <http://okina.univ-angers.fr/publications/ua6614>
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