



Second-Order Nonlinear Optical Properties of Multiaddressable Indolinooxazolidine Derivatives: Joint Computational and Hyper-Rayleigh Scattering Investigations

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Résumé en anglais	<p>The linear and nonlinear optical (NLO) properties of two indolinooxazolidine derivatives acting as multiaddressable switches are reported. The second-order hyperpolarizability contrasts upon commutation between their closed and open forms are characterized using hyper-Rayleigh scattering (HRS) measurements, and rationalized by means of density functional theory and post Hartree-Fock ab initio calculations. It is evidenced that the addition of a withdrawing substituent on the indolinic subunit leads to a more effective photoinduced charge transfer while decreasing the transition energy of the $S_0 \rightarrow S_1$ transition, which induces a significant enhancement of the HRS response of the open form. This substitution is however detrimental to the NLO contrast, due to the concomitant increase of the HRS response of the closed form.</p>
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[1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=27717>

- [2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=20164>
- [3] <http://okina.univ-angers.fr/lionel.sanguinet/publications>
- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=20168>
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- [6] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=25319>
- [7] <http://okina.univ-angers.fr/publications/ua16600>
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