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**Publication date**

2017

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**Citation for published version (APA):**

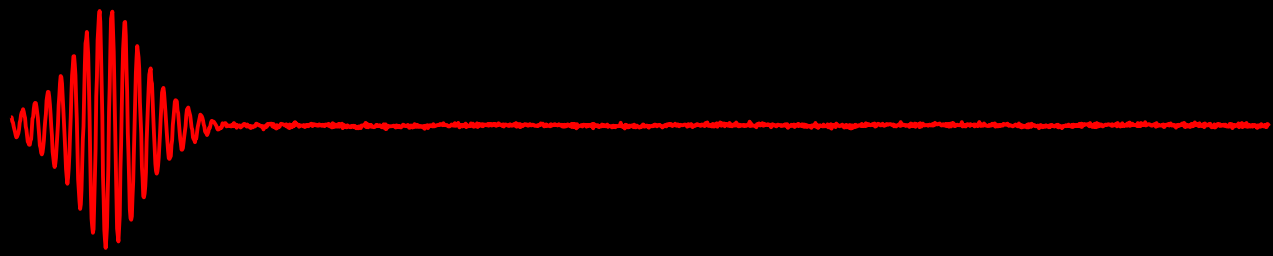
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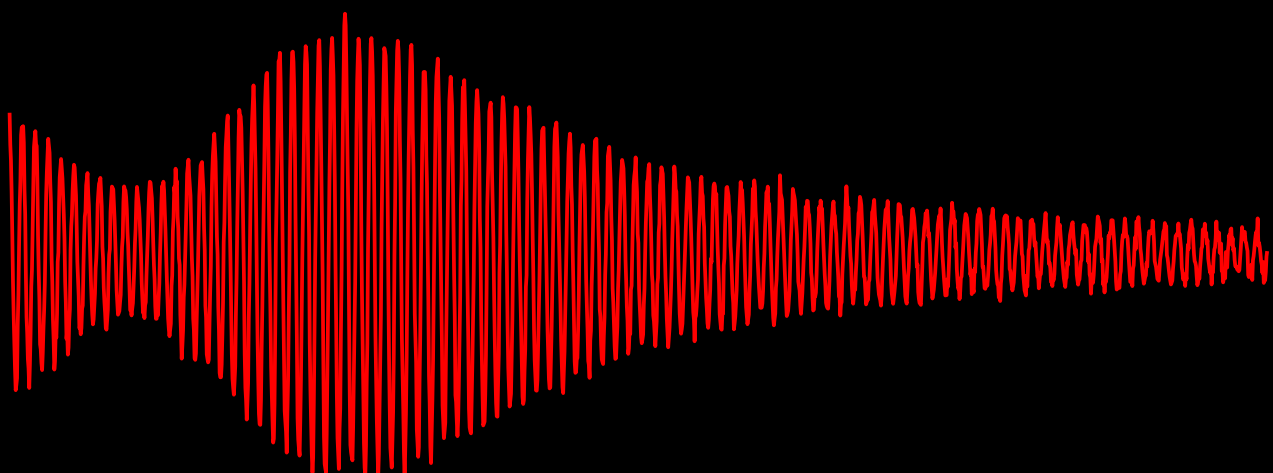
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# Ultrasensitive Nonlinear Vibrational Spectroscopy of Complex Molecular Systems



Oleg Selig

**Ultrasensitive Nonlinear Vibrational Spectroscopy  
of Complex Molecular Systems**

ISBN 978-94-6233-571-4

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Cover design: Oleg Selig

# Ultrasensitive Nonlinear Vibrational Spectroscopy of Complex Molecular Systems

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad van doctor  
aan de Universiteit van Amsterdam  
op gezag van de Rector Magnificus  
prof. dr. ir. K. I. J. Maex  
ten overstaan van een door het College voor Promoties  
ingestelde commissie,  
in het openbaar te verdedigen in de Agnietenkapel  
op donderdag 30 maart 2017, te 14:00 uur

door

Oleg Selig

geboren te Alma-Ata, Kazachstan

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The work described in this thesis was performed at the FOM Institute AMOLF, Science Park 104, 1098 XG Amsterdam, The Netherlands. This work is part of the research programme of the *Stichting Fundamenteel Onderzoek der Materie* (FOM), which is financially supported by the *Nederlandse Organisatie voor Wetenschappelijk Onderzoek* (NWO).



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*In preparation*
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Ultrasensitive ultrafast vibrational spectroscopy employing the near field of gold nanoantennas  
*Phys. Rev. Lett.* **111**, 23:233004:1–5 (2015)
- Yves L.A. Rezus and Oleg Selig  
Impact of local-field effects on the plasmonic enhancement of vibrational signals by infrared nanoantennas  
*Opt. Express* **24**, 2202–2227 (2016)
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Real-time observation of organic cation reorientation in methylammonium lead iodide perovskites  
*J. Phys. Chem. Lett.* **6**, 3663–3669 (2015)
- Oleg Selig, Aditya Sadhanala, Christian Müller, Robert Lovrincic, Zhuoying Chen, Yves L.A. Rezus, Jarvist M. Frost, Thomas L.C. Jansen, Artem A. Bakulin  
Organic cation rotation and immobilisation in pure and mixed methylammonium Lead-Halide Perovskites  
*Submitted*

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Mode-selective vibrational modulation of charge transport in organic electronic devices  
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