

## Prof. Dr. Ellen Backus

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<b>Date and Place of Birth</b>	February 15 <sup>th</sup> , 1978 Beverwijk
<b>Nationality</b>	Dutch
<b>Children</b>	0



### Professional Experience

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<b>Since Oct 2018</b>	Physical chemistry professor, University of Vienna
<b>Since 2017</b>	Physics professor by special appointment, University of Amsterdam
<b>Since 2014</b>	Independent Minerva group leader, MPIP, Mainz
<b>2012-2014</b>	Group leader, MPIP, Mainz
<b>2008-2012</b>	Senior postdoc, Research Institute AMOLF, Amsterdam
<b>2006-2008</b>	Postdoc, Physical Chemistry Dept., University of Zurich

### Academic Qualifications

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<b>2000-2005</b>	PhD in Chemistry at Leiden University, the Netherlands
<b>1996-2000</b>	Study of Chemistry at the University of Amsterdam, the Netherlands

### Important Grants and Prizes

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<b>2018</b>	Nerst-Haber-Bodenstein-Prize, Bunsengesellschaft, Germany
<b>2014-2019</b>	Fundamentals of photocatalytic splitting of water, ERC starting grant
<b>2008-2011</b>	VENI Independent PostDoc fellowship, NWO, the Netherlands
<b>2005</b>	“Discoverer of the Year”, Science faculty, Leiden University

## 10 Most Important Publications

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1. L.B. Dreier, Y. Nagata, H. Lutz, G. Gonella, J. Hunger, E.H.G. Backus, and M. Bonn Saturation of Charge-Induced Water Alignment at Model Membrane Surfaces *Sci. Adv.* **4** (2018) eaap7415
2. S. Hosseinpour, F. Tang, F. Wang, R.A. Livingstone, S.J. Schlegel, T. Ohto, M. Bonn, Y. Nagata, E.H.G. Backus, Chemisorbed and physisorbed water at the TiO<sub>2</sub>/water interface, *J. Phys. Chem. Lett.* **8** (2017) 2195
3. M.A. Sánchez, T. Kling, T. Ishiyama, M.-J. van Zadel, P.J. Bisson, M. Mezger, M.N. Jochum, J.D. Cyran, W.J. Smit, H.J. Bakker, M.J. Shultz, A. Morita, D. Donadio, Y. Nagata, M. Bonn, E.H.G. Backus, Experimental and theoretical evidence for bilayer-by-bilayer surface melting of crystalline ice, *Proc. Nat. Acad. Sci. USA* **114** (2017) 227
4. R. Khatib\*, E.H.G. Backus\*, M. Bonn, M.J. Perez-Haro, M.P. Gaigeot, M. Sulpizi, Water orientation and hydrogen bond structure at the fluorite/water interface, *Sci. Rep.* **6** (2016) 24287 (\* equally contributed)
5. R.A. Livingstone, Y. Nagata, M. Bonn, E.H.G. Backus, Two Types of Water at the Water-Surfactant Interface Revealed by Time-Resolved Vibrational Spectroscopy, *J. Am. Chem. Soc.* **137** (2015) 14912
6. M. Bonn, Y. Nagata, E.H.G. Backus, Molecular Structure and Dynamics of Water at the Water–Air Interface Studied with Surface-Specific Vibrational Spectroscopy, *Angew. Chem. Int. Ed.* **54** (2015) 5560
7. D. Lis, E.H.G. Backus, J. Hunger, S.H. Parekh, M. Bonn, Liquid flow along a solid surface reversibly alters interfacial chemistry, *Science* **344** (2014) 1138
8. E.H.G. Backus, S. Garrett-Roe, P. Hamm, Phasing problem of heterodyne-detected two-dimensional infrared spectroscopy, *Opt. Lett.* **33** (2008) 2665
9. E.H.G. Backus, M.L. Grecea, A.W. Kleyn, M. Bonn, Surface crystallization of amorphous solid water, *Phys. Rev. Lett.* **92** (2004) 236101
10. E.H.G. Backus, A. Eichler, A.W. Kleyn, M. Bonn, Real-time observation of molecular motion on a surface, *Science* **310** (2005) 1790

Total 84 publications (including accepted), h-index 26, ORCID: 0000-0002-6202-0280.