**CURRICULUM VITAE**

**PERSONAL INFORMATION**


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| Name: | Leo Gross |
| Date of birth: | 06.06.1973, Berlin |
| Nationality: | German |
| Current institution: | IBM Research Europe – Zurich,<br>Science of Quantum and Information Technology (SQIT) Department<br>Säumerstrasse 4, 8803 Rüschlikon, Switzerland |
| Web page: | https://research.ibm.com/people/leo-gross |


**CURRENT POSITION**

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| Since 2018 | Principal research scientist, lead of the Atom/molecule manipulation group, IBM Research – Zurich https://research.ibm.com/projects/atom-and-molecule-manipulation |
| Since 2009 | Research staff member at IBM Research – Zurich |

**PREVIOUS POSITIONS**

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| 2005 – 2009 | Postdoctoral fellow in Dr. Gerhard Meyer's group, IBM Research – Zurich, Switzerland |
| 2005 | Postdoctoral fellow in Prof. Karl-Heinz Rieder's group, FU Berlin, Germany |

**EDUCATION**

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|---|---|
| 2001 – 2005 | PhD in Prof. Karl-Heinz Rieder's group, FU Berlin, Germany<br>Title: "LT-STM Investigation of Organic Molecules for Molecular Electronics" |
| 1997 – 2001 | Graduate studies and Diploma in Prof. Harald Fuchs' group, University Münster, Germany |
| 1996 – 1997 | Graduate studies and member of Prof. Ulrike Diebold's group, Tulane University, New Orleans, LA, USA |
| 1994 – 1996 | Undergraduate studies in Physics, FU Berlin, Germany |

**AWARDS**

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| 2024 | IBM Outstanding Technical Achievement Award |
| 2022 | Fellow of the American Physical Society (APS) |
| 2022 | IBM Outstanding Technical Achievement Award |
| 2020 | Debye Visiting Chair, Utrecht University, NL |
| 2020 | Silver Combustion Medal, awarded by the Combustion Institute |
| 2019 | IBM Outstanding Technical Achievement Award |
| 2016 | IBM Outstanding Technical Achievement Award |
| 2014 | IBM Outstanding Technical Achievement Award |
| 2013 | IBM Outstanding Technical Achievement Award |
| 2012 | Feynman Prize for Nanotechnology, awarded by the Foresight Institute |
| 2012 | IBM Research Division Award |
| 2010 | Gerhard Ertl Young Investigator Award, awarded by the Surface Science division of the German Physical Society (DPG) |
| 2010 | IBM Outstanding Innovation Award |
| 2006 | Tiburtius-Preis for dissertation, awarded by the Berlin universities. |

**GRANTS**

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| 2021 – 2027 | ERC Synergy Grant MolDAM as coordinator, together with Jascha Repp, University Regensburg and Diego Peña, University Santiago de Compostela |
| 2016 – 2021 | ERC Consolidator Grant AMSEL |

**PUBLICATIONS METRICS**

Google Scholar: https://scholar.google.ch/citations?user=boqXIRcAAAAJ&hl=
H-index 54, citations 12000, publications 120, Google scholar, data retrieved 06.03.2024

**SELECTED PUBLICATIONS**

1. L. Gross, F. Mohn, N. Moll, P. Liljeroth, G. Meyer, The chemical structure of a molecule resolved by atomic force microscopy, ***Science*** **325**, 1110–1114 (2009).

2. L. Gross, F. Mohn, P. Liljeroth, J. Repp, F. J. Giessibl, G. Meyer, Measuring the charge state of an adatom with noncontact atomic force microscopy, ***Science*** **324**, 1428–1431 (2009).

3. L. Gross, N. Moll, F. Mohn, A. Curioni, G. Meyer, F. Hanke, M. Persson, High-Resolution Molecular Orbital Imaging Using a -Wave STM Tip, ***Phys. Rev. Lett.*** **107**, 086101 (2011).

4. L. Gross, F. Mohn, N. Moll, B. Schuler, A. Criado, E. Guitián, D. Peña, A. Gourdon, G. Meyer, Bond-order discrimination by atomic force microscopy, ***Science*** **337**, 1326–1329 (2012).

5. B. Schuler, W. Liu, A. Tkatchenko, N. Moll, G. Meyer, A. Mistry, D. Fox, L. Gross, Adsorption Geometry Determination of Single Molecules by Atomic Force Microscopy, ***Phys. Rev. Lett.*** **111**, 106103 (2013).

6. B. Schuler, G. Meyer, D. Peña, O.C. Mullins, L. Gross, Unraveling the molecular structures of asphaltenes by atomic force microscopy, ***J. Am. Chem. Soc.*** 137, 9870–9876 (2015).

7. N. Pavlicek, A. Mistry, Z. Majzik, N. Moll, G. Meyer, D. J. Fox, L. Gross, Synthesis and characterization of triangulene, ***Nat. Nano.*** **12**, 308–311 (2017).

8. S. Fatayer, F. Albrecht, Y. Zhang, D. Urbonas, D. Peña, N. Moll, L. Gross, Molecular structure elucidation with charge-state control, ***Science 365***, 142–145 (2019).

9. K. Kaiser, L. M. Scriven, F. Schulz, P. Gawel, L. Gross, H. L. Anderson, An *sp*-hybridized molecular carbon allotrope, cyclo[18]carbon, ***Science*** **365**, 1299–1301 (2019).

10. F. Albrecht, S. Fatayer, I. Pozo, I. Tavernelli, J. Repp, D. Peña, L. Gross, Selectivity in single-molecule reactions by tip-induced redox chemistry, ***Science*** **377**, 298–301 (2022).

11. Y. Gao, F. Albrecht, I. Rončević, I. Ettedgui, P. Kumar, L. M. Scriven, K. E. Christensen, S. Mishra, L. Righetti, M. Rossmannek, I. Tavernelli, H. L. Anderson, L. Gross, On-surface synthesis of a doubly anti-aromatic carbon allotrope. ***Nature*** **623**, 977–981 (2023).