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ACADEMIC EDUCATION

- 1985 - 1989 Technische Universität Berlin, Germany
• Vordiplom in physics (first grade)
- 1989 - 1993 University of Bristol, UK
• M.Sc. & Ph.D. in physics (semiconducting materials and devices, electron microscopy)

EXPERIENCE

- 1988 - 1989 Technische Universität Berlin, Germany
• Tutor with teaching responsibilities
• Student representative on faculty board, joint responsibility for faculty policies and degree course design
- 1991 - 1993 University of Bristol, UK
• Demonstrator in undergraduate project laboratory, responsible for student supervision and grading
- 1993 - 1998 MRC Laboratory of Molecular Biology, Cambridge, UK
• Postdoctoral research assistant
• Supervisor for research student, responsible for project design and supervision
- 1996 - 1998 Darwin College, Cambridge, UK
• Organizer of scientific seminars
- 1999 - 2013 Brandeis University, Waltham, MA
• Assistant Professor (1999), Associate Professor (2004), Full Professor (2006)
- 2013 - 2018 Janelia Research Campus, Ashburn, VA
• Group leader
- 2018 - present University of Massachusetts Medical School, Worcester, MA
• Professor

AWARDS, FELLOWSHIPS AND APPOINTMENTS

- 1988-90 Award from the Studienstiftung des Deutschen Volkes (national student award based on university nomination and interview)
- 1989 Award from DAAD (German Academic Exchange Service)
- 1990-93 Student grant from British Telecommunications plc.
- 1995-96 Research fellowship from Deutsche Forschungsgemeinschaft
- 1996-98 Research fellowship at Darwin College, Cambridge, England
- 2000-present Investigatorship, Howard Hughes Medical Institute
- 2004-05 Research fellowship from the Humboldt Foundation
- 2015-present Editor, eLife Sciences
- 2021 Election to the National Academy of Sciences, USA

RESEARCH ARTICLES

Grigorieff, N., Cherns, D., Yates, M. J., Hockly, M., Perrin, S. D. & Aylett, M. R. (1993). Electron microscopy of ultra-thin buried layers in InP and InGaAs. *Phil. Mag.* **68**, 121–136.

Grigorieff, N., Cherns, D., Preston, A. R. & Yates, M. J. (1995). Models for termination of crystal boundaries in the theory of transmission electron diffraction and comparison with experimental data. *Acta Cryst.* **A51**, 343–350.

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Grigorieff, N. & Henderson, R. (1995). Diffuse scattering in electron diffraction data from protein crystals. *Ultramicroscopy* **60**, 295–309.

Grigorieff, N., Ceska, T. A., Downing, K. H., Baldwin, J. M. & Henderson, R. (1996). Electron-crystallographic refinement of the structure of bacteriorhodopsin. *J. Mol. Biol.* **259**, 393–421.

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Grigorieff, N. (1998). Three-dimensional structure of bovine NADH:ubiquinone oxidoreductase (complex I) at 22 Å in ice. *J. Mol. Biol.* **277**, 1033–1046.

Smith, C. J., Grigorieff, N. & Pearse, B. M. F. (1998). Clathrin coats at 21 Å resolution - A cellular assembly designed to recycle multiple membrane receptors. *EMBO J.* **17**, 4943–4953.

Lam, Y.-M., Grigorieff, N. & Goldbeck-Wood, G. (1999) Direct visualisation of micelles of pluronic block copolymers in aqueous solution by cryo-TEM. *Phys. Chem. Chem. Phys.* **1**, 3331–3334.

Grigorieff, N. & Grigorieff, R. D. (1999). Asymptotisches Verhalten des Erwartungswertes für den größten Wert bei n unabhängigen Beobachtungen einer normalverteilten Variablen. *Reprint-Reihe Fachbereich Mathematik, Technische Universität Berlin* Nr. 647.

Grigorieff, N. (2000) Resolution Measurement in Structures Derived from Single Particles. *Acta Cryst.* **D56**, 1270–1277.

Mindell, J. A., Maduke, M., Miller, C. & Grigorieff, N. (2001). Projection structure of a ClC-type chloride channel at 6.5 Å resolution. *Nature* **409**, 219–223.

Sokolova, O., Kolmakova-Partensky, L. & Grigorieff, N. (2001). Three-dimensional structure of a voltage-gated potassium channel at 2.5 nm resolution. *Structure* **9**, 215–220.

Pirrucello, M.M., N. Grigorieff, and J.A. Mindell, (2002) Electron diffraction of a bacterial ClC-type chloride channel. *Novartis Found Symp.* **245**, 193–203.

McGovern, S. L., Caselli, E., Grigorieff, N. & Shoichet, B. K. (2002) A common mechanism underlying promiscuous inhibitors from virtual and high-throughput screening. *J. Med. Chem.* **45**, 1712–1722.

Jurica, M. S., Licklider, L. J., Gygi, S. P., Grigorieff, N. & Moore, M. J. (2002) Purification and characterization of native spliceosomes suitable for three-dimensional structural studies. *RNA* **8**, 426–439.

- Mindell, J. A. & Grigorieff, N. (2003) Accurate determination of local defocus and specimen tilt in electron microscopy. *J. Struct. Biol.* **142**, 334–347.
- Furst, J., Sutton, R. B., Chen, J., Brunger, A. T. & Grigorieff, N. (2003) Electron Cryo-Microscopy Structure of N-ethyl Maleimide Sensitive Factor at 11 Å Resolution. *EMBO J.* **22**, 4365–4374.
- Wolf, M., Eberhart, A., Glossmann, H., Striessnig, J. & Grigorieff, N. (2003) Visualization of the Domain Structure of an L-Type Ca^{2+} Channel Using Electron Cryo-Microscopy. *J. Mol. Biol.* **332**, 171–182.
- Sokolova, O., Accardi, A., Gutierrez, D., Lau, A., Rigney, M. & Grigorieff, N. (2003). Conformational changes in the C-terminus of *Shaker* K^+ channel, bound to the rat Kv β 2-subunit. *PNAS* **100**, 12607–12612.
- Chen, J. Z., Furst, J., Chapman, M. S. & Grigorieff, N. (2003) Low-resolution structure refinement in electron microscopy. *J. Struct. Biol.* **144**, 144–151.
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Schmidt, M., Sachse, C., Richter, W., Xu, C., Fändrich, M. & Grigorieff, N. (2009) Comparison of Alzheimer A β (1-40) and A β (1-42) amyloid fibrils reveals similar protofilament structures. *PNAS* **106**, 19813–19818.

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Settembre, E., Chen, J. Z., Dormitzer, P. R., Grigorieff, N. & Harrison, S. C. (2011) Atomic model of an infectious rotavirus particle. *EMBO J.* **30**, 408–416.

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Brilot, A. F., Chen, J. Z., Cheng, A., Pan, J., Harrison, S. C., Potter, C. S., Carragher, B., Henderson, R., Grigorieff, N. (2012) Beam-induced motion of vitrified specimen on holey carbon film. *J. Struct. Biol.* **177**, 630–637.

Sindelar, C. V. & Grigorieff, N. (2012) Optimal noise reduction in 3D reconstructions of single particles using a volume-normalized filter. *J. Struct. Biol.* **180**, 26–38.

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Brilot, A. F., Korostelev, A. A., Ermolenko, D. N. & Grigorieff, N. (2013) Structure of the ribosome with elongation factor G trapped in the pre-translocation state. *PNAS* **110**, 20994–20999.

Ruskin, R. S., Yu, Z. & Grigorieff, N. (2013) Quantitative characterization of electron detectors for transmission electron microscopy. *J. Struct. Biol.* **184**, 385–393.

Rohou, A. & Grigorieff, N. (2014) FREALIX: model-based refinement of helical filament structures from electron micrographs. *J. Struct. Biol.* **186**, 234–244.

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Grant, T. & Grigorieff, N. (2015) Automatic estimation and correction of anisotropic magnification distortion in electron microscopes. *J. Struct. Biol.* **192**, 204–208.

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Tajima, N., Karakas, E., Grant, T., Simorowski, N., Diaz-Avalos, R., Grigorieff, N. & Furukawa, H. (2016) Activation of NMDA receptors and the mechanism of inhibition by ifenprodil. *Nature* **534**, 63–68.

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