

Curriculum Vitae

Professor Dr. Frank Postberg,

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Current position

Since 2018 **Professor in Planetary Science** / Head of Planetary Science and Remote Sensing/ Institute of Geological Sciences / Freie Universität Berlin

Education

June 2012 **Habilitation** (Venia Legendi) / Faculty of Chemistry and Geoscience / Heidelberg University
Dec 2007 **PhD** (Dr. rer. nat.) / Faculty of Physics and Astronomy / Heidelberg University / carried out at MPI for Nuclear Physics, Heidelberg / Supervisor: Prof. Dr. Eberhard Grün
Dec 2004 **Diplom (MSc.) in Physics** / Faculty of Physics / University of Darmstadt
Sept 1998 **Diplom (MSc.) in Chemical Engineering** / Faculty of Chemistry and Biochemistry / University of Apl. Sciences Darmstadt

Most relevant projects & experience

2023 Co-Investigator of the **BioSigN** (Bio-Sig-natures and habitable Niches) microbiology experiment on the ISS
2022 Member of **ESA Expert Team** to study next strategic space mission - **L4** - to icy ocean moons
2021 Project Lead: **Machine Coregistration** of large heterogeneous datasets of planetary surfaces for the systematic generation of global image and topography models (BMWK 500O2204).
2019 Co - Investigator JANUS Camera System on ESA's **JUICE** mission
2018 Project Lead (FU Berlin) High Resolution Stereo Camera (HRSC) on ESA's **Mars Express**
2017 **Consolidator Grant** of the European Research Council (**ERC**), Habitability of Oceans and Aqueous Systems on Icy Satellites (Habitat-OASIS)
2017 Co-Investigator Destiny Dust Analyzer (DDS) on JAXA's **Destiny+** mission
2015 Co-Investigator Surface Dust Analyzer (SUDA) on NASA's **Europa Clipper** mission
2010 Co-Investigator Cosmic Dust Analyzer (CDA) on the ESA/NASA **Cassini-Huygens** mission
2008 Member of the Stardust Interstellar Preliminary Examination Team (ISPE) of the **Stardust** space mission to comet Wild 2

Previous positions

2016 – 2018 **Research Group Leader** / Planetary Science by Space Missions / Institute of Earth Science / University of Heidelberg
2015 – 2016 **Visiting Scientist (DFG Heisenberg grant)** / Laboratory for Atmospheric and Space Physics / University of Colorado / Boulder, USA
2015 **Research Scientist (DFG Heisenberg grant)** / Institute of Earth Science / University of Heidelberg
2011 – 2014 **Research Scientist** / Institute of Space Systems (IRS), University of Stuttgart
2008 – 2011 **Postdoc (Research-Fellowship)**, Cosmochemistry Group Prof. Dr. Mario Trieloff / Institute of Earth Science / University of Heidelberg
2004 – 2008 **Research Assistant and Postdoc** / Max-Planck-Institute for Nuclear Physics / Heidelberg / Cosmic Dust Group, Prof. Dr. Eberhard Grün

Career breaks

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|------|---------------------------------------|
| 2012 | Paternal leave for daughter, 6 months |
| 2014 | Paternal leave for son 4 Months |

Most relevant publications (starting with latest)

See also: <https://scholar.google.de/citations?hl=de&user=4QWuc98AAAAJ>

- **Postberg, F.**, Sekine, Y., Klenner, F., Glein, C. R., Zou, Z. et al. (2023) Detection of Phosphates Originating from Enceladus' Ocean, *Nature*, in press
- MacKenzie S.M., Neveau M., Davila A.F., et al. incl. **Postberg F.** (2021) The Enceladus Orbilander Mission Concept: Balancing Return and Resources in the Search for Life, *The Planetary Science Journal*, 2:77, doi: <https://doi.org/10.3847/PSJ/abe4da>
- Klenner, F*, **Postberg F***, Hillier, J. et al (2020) Discriminating Abiotic and Biotic Fingerprints of Amino Acids and Fatty Acids in Ice Grains relevant to Ocean Worlds, *Astrobiology*, doi.org/10.1089/ast.2019.2188
- **Postberg, F***, Khawaja, N*. and 18 co-authors (2018) Macromolecular organic compounds from the depths of Enceladus. *Nature* **558**, 564–568, doi: [10.1038/s41586-018-0246-4](https://doi.org/10.1038/s41586-018-0246-4).
- **Postberg, F.**, Clark, R.N., Hansen, C.J. et al. (2018b) Plume and Surface composition of Enceladus. In: Schenk, P.M. et al. (eds) *Enceladus and the Icy Moons of Saturn*, University of Arizona Press, 129-162. doi: [10.2458/azu_uapress_9780816537075](https://doi.org/10.2458/azu_uapress_9780816537075).
- Altobelli N*, **Postberg F.***, Fiege K.* and 11 co-authors (2016) Flux and composition of interstellar dust at Saturn from Cassini's Cosmic Dust Analyser, *Science* 352, 312-318, doi: [10.1126/science.aac6397](https://doi.org/10.1126/science.aac6397).
- Hsu, H.W.*, **Postberg, F.***, Sekine, Y.*, Shibuya, T., Kempf, S., Horányi, M., Juhász, A., Altobelli, N., Suzuki, K., Masaki, Y., Kuwatani, T., Tachibana, S., Sirono, S., Moragas-Klostermeyer, G., Srama, R. (2015) Ongoing hydrothermal activities within Enceladus, *Nature*, Vol. 519, p. 207-210, doi: [10.1038/nature14262](https://doi.org/10.1038/nature14262).
- Westphal, A. and 65 co-authors incl. **Postberg, F.** (2014) Evidence for interstellar origin of seven dust particles collected by the Stardust spacecraft, *Science* 345, 786 – 791, doi: [10.1126/science.1252496](https://doi.org/10.1126/science.1252496).
- **Postberg, F.**, Schmidt J., Hillier, J.K., Kempf S., Srama, R. (2011a) A salt-water reservoir as the source of a compositionally stratified plume on Enceladus, *Nature*, Vol. 474, Issue 7353, p. 620-622, doi: [10.1038/nature10175](https://doi.org/10.1038/nature10175).
- **Postberg, F.**, Grün, E., Horanyi, M., Kempf, S., Krüger, H., Schmidt, J., Spahn, F., Srama, R., Sternovsky, Z., Tieloff, M. (2011b) Compositional mapping of planetary moons by mass spectrometry of dust ejecta, *Planetary and Space Science*, Vol. 59, p. 1815–1825, doi: [10.1016/j.pss.2011.05.001](https://doi.org/10.1016/j.pss.2011.05.001).
- **Postberg, F.**, Kempf, S., Schmidt, J., Brilliantov, N., Beinsen, A., Abel, B., Buck, U., Srama, R. (2009) Sodium Salts in E Ring Ice Grains from an Ocean below the Surface of Enceladus, *Nature*, Vol. 459, Issue 7250, p. 1098 – 1101, doi: [10.1038/nature08046](https://doi.org/10.1038/nature08046).
- **Postberg, F.**, Hillier, J.K., Kempf, Srama, R., Green, S.F., McBride, N., and Grün, E. (2008) The E-ring in the vicinity of Enceladus II: Probing the moon's interior - the composition of E-ring particles, *Icarus*, vol. 193, p. 438-454, doi: [10.1016/j.icarus.2007.09.001](https://doi.org/10.1016/j.icarus.2007.09.001).
- **Postberg, F.**, Kempf, S., Srama, R., Green, S.F., Hillier, J.K., McBride, N., Grün, E. (2006) Composition of Jovian Dust Stream Particles, *Icarus*, vol. 183, p. 122-134, doi: [10.1016/j.icarus.2006.02.001](https://doi.org/10.1016/j.icarus.2006.02.001).

* = Shared lead authors.