

Fabian Dellefant - Curriculum Vitae

Education

01/2020 – 01/2024	Ludwig-Maximilians-Universität (LMU) <ul style="list-style-type: none">• PhD student/candidate in the field of impact geology• Grade: <i>magna cum laude</i> (1.0)	Munich
10/2016 – 03/2019	Ludwig-Maximilians-Universität Technical University Munich (TUM) <ul style="list-style-type: none">• Course: MSc Geomaterials and Geochemistry• Grade: 1.28	Munich
09/2013 – 03/2016	Ludwig-Maximilians-Universität Technical University of Munich <ul style="list-style-type: none">• Course: BSc Geosciences (focus on Mineralogy)• Grade: 1.4 (with distinction)	Munich
10/2012 – 09/2013	Ruhr-Universität <ul style="list-style-type: none">• Course: BSc Geosciences	Bochum
09/2005 – 06/2007	Wilhelmsgymnasium • Grade: 2.7 Louise-Schroeder-Gymnasium	Munich

Theses

01/2024 PhD	<i>Transformation, deformation, and formation of minerals in the Vredefort and Ries impact structure and implications for magnetic properties of impactites</i>
10/2018 MSc	<i>Petrographical, petrophysical, and geochemical characterization of sandstones from the temples and quarries of the Angkor area, Cambodia</i>
07/2015 BSc	<i>Petrological and geochemical investigation of tourmalines from northeast Brazil</i>

Scholarship

since 10/2022	<i>Mentoring Program (LMU)</i>
03/2014 – 03/2019	<i>German Academic Scholarship Foundation (Studienstiftung des deutschen Volkes)</i>

Published / accepted manuscripts

Brückner L. M., Dellefant F., and Trepmann C. A. (2024) Quartz cleavage fracturing and subsequent recrystallization along the damage zone recording fast stress unloading. *Journal of Structural Geology* 178:105008. <https://doi.org/10.1016/j.jsg.2023.105008>.

Dellefant, F., Trepmann, C.A., Gilder, S.A., Sleptsova, I. V., Kaliwoda, M., and Weiss, B.P. (2022) Ilmenite and magnetite microfabrics in shocked gneisses from the Vredefort impact structure, South Africa. *Contributions to Mineralogy and Petrology*, 5. <https://doi.org/10.1007/s00410-022-01950-5>

Dellefant, F., Trepmann, C.A., Schmahl, W.W., Gilder, S.A., Sleptsova, I. V., and Kaliwoda, M. (2023) Ilmenite phase transformations in suevite from the Ries impact structure (Germany) record evolution in pressure, temperature, and oxygen fugacity conditions. *American Mineralogist*, in press. <https://doi.org/10.2138/am-2023-8985>

Dellefant F., D'Ercole G., Budka J., and Kaliwoda M. (2023) Differentiation of Late Bronze Age Nubian- and Egyptian-style ceramics from northern Sudan by manufacturing firing temperatures using Raman Spectroscopy. *Journal of Archaeological Science: Reports* 52:104233. <https://doi.org/10.1016/j.jasrep.2023.104233>.

Dellefant, F., Seybold, L., Trepmann, C.A., Gilder, S.A., Sleptsova, I. V., Hölzl, S., and Kaliwoda, M. (accepted) Emplacement of shocked basement clasts during crater excavation in the Ries impact structure. *International Journal of Earth Sciences*.

Seybold, L., Trepmann, C.A., Hölzl, S., Pollok, K., Langenhorst, F., Dellefant, F., and Kaliwoda, M. (2023) Twinned calcite as an indicator of high differential stresses and low shock pressure conditions during impact cratering. *Meteoritics & Planetary Science*, 19. doi.org/10.1111/maps.14056

Sleptsova I. V., Gilder S. A., Dellefant F., Trepmann C. A., Ahanin N., and Pohl J. (2024). Thermal and Structural History of Impact Ejecta Deposits, Ries Impact Structure, Germany. *Journal of Geophysical Research: Solid Earth* 129:1–23. <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2023JB027460>.

Trepmann, C.A., Dellefant, F., Kaliwoda, M., Hess, K.U., Schmahl, W.W., and Hölzl, S. (2020) Quartz and cristobalite ballen in impact melt rocks from the Ries impact structure, Germany, formed by dehydration of shock-generated amorphous phases. *Meteoritics and Planetary Science*, 55, 2360–2374. <https://doi.org/10.1111/maps.13590>

Submitted manuscripts

Tonti-Filippini, J., Robert, B., Muller, É., Paul, A.N., Dellefant, F., Wack, M., Meng, J., Zhao, X., Schaltegger, U., and Gilder, S.A. - Middle Neoproterozoic (Tonian) polar wander of South China: Paleomagnetism and U-Pb geochronology of the Laoshanya Formation. *Journal of Geophysical Research: Solid Earth*.

Attendance at conferences

54 Lunar and Planetary Science Conference (2023) Ilmenite phase transformations in suevite from the Ries impact structure (Germany) record evolving temperature, pressure, and oxygen fugacity conditions

85th meeting of The Meteoritical Society (2022) Shock related microfabrics of ilmenite and associated Fe-bearing phases.

EGU General Assembly (2022) Ilmenite transformations in suevites from the Ries meteorite impact structure, Germany

EGU General Assembly (2021) Distinguishing shock-related microstructures in gneisses from the Vredefort impact structure, South Africa.

52 Lunar and Planetary Science Conference (2021) Distinguishing Shock-Related Microstructures in Gneisses from the Vredefort Impact Structure, South Africa.

GeoUtrecht (2020) Quartz ballen structures and related cristobalite in impact melt breccias from the Ries impact structure, Germany, formed by dehydration of shock-generated amorphous phases

Research experience (not exhaustive)

01/2020 – 03/2024	Research fellow at DFG-Project (TR534/9-1) <ul style="list-style-type: none">• Magnetic properties and microfabrics of shocked minerals and their influence on the magnetic anomalies in the Ries, Vredefort and Manicouagan impact structures Supervisors: Prof. Dr. Trepmann and Prof. Dr. Gilder	Munich
09/2019 – 11/2019	Student assistant in the <i>Museum Mineralogia</i> <ul style="list-style-type: none">• Assistance with the exhibition <i>Metamorphose</i>	Munich
2017/2018	Two field trips for Master's Thesis to Cambodia <ul style="list-style-type: none">• Sampling of Arenites from monuments and quarries	Siem Reap
11/2015 – 02/2016	Tutor <i>Studiforscht@Geo</i> (LMU) <ul style="list-style-type: none">• Coordination of student analyses of minerals using FTIR	Munich
02/2015 – 03/2015	Field trip for Bachelor's Thesis to Brazil <ul style="list-style-type: none">• Sampling of tourmalines	Paraíba
11/2013 – 02/2014	Internship <i>Studiforscht@Geo</i> (LMU)	Munich

Teaching experience (not exhaustive)

03/2024	Teaching assistant "Introduction to polarized light microscopy"
02/2024	Seminar: U-stage microscopy
2023	Supervisor of a Bachelor's Thesis
02/2023	Seminar: U-stage microscopy
2021/2022	Supervisor of a Bachelor's Thesis
02/2022	Seminar: U-stage microscopy
06/2021	Field excursion with Bachelor students to the Ries impact structure (2 days)
02/2021	Seminar: U-stage microscopy
03/2020 – 07/2020	<i>Studi_Forscht@Geo</i> supervisor of two students
02/2020	Seminar: U-stage microscopy

Grant acquisition

- Two student assistants (Vereinbarkeit@geo: ≈910€)
- Student assistant (Mentoring Program: ≈990€)
- FeTiO₃ powder for experiments (Mentoring Program: ≈140€)
- Student assistant (Vereinbarkeit@geo: ≈980€)
- Two student assistants (Lehre@Studiforscht: ≈980€)
- Travel grant to USA (Mentoring Program: ≈1400€)
- Travel grant to Cambodia (Studienstiftung des deutschen Volkes: ≈1100€)
- Travel grant to Cambodia (Studienstiftung des deutschen Volkes: ≈900€)
- Travel grant to Brazil (Studienstiftung des deutschen Volkes: ≈950€)

Operating experiences of analytical methods (selected)

- Optical microscopy (transmitted/reflected) and universal-stage measurements
- Scanning electron microscopy (SEM) / Electron backscatter diffraction (EBSD)
- Raman spectroscopy and Fourier-transform infrared spectroscopy (FTIR)

Work experience (not exhaustive)

05/2016 – 09/2016	Working Student Harman Becker Automotive Systems • Modification of soft- and hardware components	Munich
09/2008 – 04/2012	Manhattan Music & Kaffee, Espresso & Barista • Music equipment retailing & Gastronomy	Munich

Voluntary work

since 07/2023	Chairmanship of the board of "Freunde der Mineralogischen Staatssammlung Bayerns e.V."	Munich
10/2015 – 12/2019	St. Anna Gymnasium • Mineral- and rock exhibitions	Munich

04/2015 – 12/2019	Museum Reich der Kristalle <ul style="list-style-type: none"> • Museum tours for children and adolescents 	Munich
03/2016 – 02/2018	Private lesson for refugee from Somalia <ul style="list-style-type: none"> • Class in Mathematics and German 	Munich
04/2014 – 09/2015	Students Council (LMU) <ul style="list-style-type: none"> • Appointment committee • Commission for the utilization of study grants 	Munich

Art projects (selected)

Since 05/2020	Digital music releases with the pseudonym <u>KOMOREBI</u>
02/2020	Vinyl release of <u>C.O.W. 𐄂 – INTERNET LP</u> <ul style="list-style-type: none"> • Lead music producer, visual artist, and project manager
08/2018	<u>Austin Music Video Award</u> (USA) in the category <i>Best Narrative</i> for music video <u>\$hanghai Mone¥</u> <ul style="list-style-type: none"> • Lead video producer
04/2018	<u>Arte Tracks report</u> of band project <u>C.O.W. 𐄂</u> <ul style="list-style-type: none"> • Lead music producer, visual artist, and project manager
04/2016	Production of the theme song for motion picture <u>Rico, Oskar und der Diebstahlstein</u>
11/2015	Vinyl release of <u>Keno – Paradajz Lost</u> <ul style="list-style-type: none"> • Lead music producer

Additional skills

Languages	German – native, English – fluent, French – intermediate, Portuguese – basic
Computing	Virtual machines, Premiere, After Effects, Photoshop, Corel Draw, Logic
Interests	Kung Fu, Anime, Video Games, Magic: The Gathering