

# Frank Gfeller

\* 08.10.1983

## Education

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- 2013 – 2015    PhD: „Crystal chemical and structural investigations on Ca-aluminates and Ca-silicates“  
Research group for Mineralogical Crystallography, Institute for Geological Sciences,  
University of Bern.
- 2010 – 2012    Master of Science, specification „Earth Material“, Research group for Mineralogical  
Crystallography, Institute for Geological Sciences, University of Bern.  
Thesis: „Crystal chemistry of cement minerals from hydrothermally altered high-  
temperature skarns“
- 2007 – 2010    Bachelor of Science, in Erdwissenschaften at the Institute for Geological Sciences,  
University of Bern. Thesis: „Der Lochsiten Kalk- Mylonit“
- 2005 – 2006    Passerelle at BME, Berner Maturitätsschule für Erwachsene
- 2003 – 2004    Berufsmaturitätsschule at GIBB, Gewerblich Industrielle Berufsschule Bern
- 1999 – 2003    Apprenticeship as Electrician, Orell & Ramseier AG, Bern

## Further Education

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- 2017            Scanning Electron Microscopy „Advanced Course R-3“ at the „Akademie für  
Elektronenmikroskopie und Analytik gGmbH“ Münster DE.
- 2012            Course with Certificate on Contaminated Sites „Altlastenbearbeitung, von der Erfassung  
bis zur Sanierung“, University of Bern.

## Awards

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- 2013            Faculty award for the best Master-Thesis in Geo-Sciences, Faculty of Science, University  
of Bern

## Anstellungen/Berufstätigkeit

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- 2019            Foundation of Archaeolytics GmbH
- 2018            Free employee, Cantonal Department of Archaeology Zürich
- 2016 – 2018    Scientist, specialist in analytics, Cantonal Forensic Department, St.Gallen
- 2015 – 2016    Freelancing Mineralogist, Geologist and Electrician
- 2013 – 2015    PhD.-Assistant, Mineralogical Crystallography University of Bern

2010 – 2015 Lab-assistant, "Fachstelle für Sekundärrohstoffe", Institut for Geological Sciences, University of Bern. [www.rohstoff.unibe.ch](http://www.rohstoff.unibe.ch)

## Analytik

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Transmitted Light Microscopy, Reflected Light Microscopy, X-Ray Powder Diffraction (**XRPD**), Single Crystal X-Ray Diffraction (**SCXRD**), X-Ray Fluorescence (**XRF**), Raman Spectroscopy, Infrared Spectroscopy (**FT-IR**), Scanning Electron Microscopy (**SEM/EDX**), Transmission Electron Microscopy (**TEM**), Thermogravimetry (**TG/DTA**), Brunauer Emmet and Teller Surface Measurements (**BET**), Electron Micro Probe Analysis (**EMPA**), Gas and Liquid Chromatography (**GC-MS, GC-FID**) (**HP-LC**)

## Publikationen

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- Armbruster, T., Lazic, B., Gfeller, F., Galuskin, E. V., Galuskina, I. O., Savelyeva, V. B., Anowski, P. D. (2011): Chlorine content and crystal chemistry of dellaite from the Birkhin gabbro massif, Eastern Siberia, Russia. *Mineralogical Magazine*, 75 (2), 379-394.
- Galuskin, E. V., Gfeller, F., Savelyeva, V. B., Armbruster, T., Lazic, B., Galuskina, I. O., Gazeev, V. M. (2012): Pavlovskyite  $\text{Ca}_8(\text{SiO}_4)_2(\text{Si}_3\text{O}_{10})$ : A new mineral of altered silicate-carbonate xenoliths from the two Russian type localities, Birkhin massif, Baikal Lake area and Upper Chegem caldera, North Caucasus. *American Mineralogist*, 97 (4), 503-512.
- Galuskin E., Gfeller F., Armbruster T., Galuskina I., Vapnik Y., Murashko M., Włodyka R., Dzierzanowski, Panowski P. (2015): New minerals with modular structure derived from hatrurite from the pyrometamorphic hatrurim complex, Part I: Nabimusait,  $\text{KCa}_{12}(\text{SiO}_4)_4(\text{SO}_4)_2\text{O}_2\text{F}$ , from Larnite rock of the Jabel Harmun, Palestinian Autonomy, Israel. *Mineralogical Magazine* 79 (5), 1061-1072.
- Galuskin E., Gfeller F., Galuskina I., Pakhomova A., Armbruster T., Y V., Włodyka R., Dzierzanowski P., Murashko M. (2015): New minerals with modular structure derived from hatrurite from the pyrometamorphic hatrurim complex, Part II: Zadovite,  $\text{BaCa}_6[(\text{SiO}_4)(\text{PO}_4)](\text{PO}_4)_2\text{F}$ , and Aradite,  $\text{BaCa}_6[(\text{SiO}_4)(\text{VO}_4)](\text{VO}_4)_2\text{F}$ , from paralavas of the Hatrurim Basin, Negev Desert, Israel. *Mineralogical Magazine* 79 (5), 1073-1087.
- Galuskin, E. V., Gfeller, F., Galuskina, I., Armbruster, T., Krz̄ała, A., Vapnik, Y., Dzierzanowski, P. (2017): New minerals with a modular structure derived from hatrurite from the pyrometamorphic rocks. Part III. Gazeevite,  $\text{BaCa}_6(\text{SiO}_4)_2(\text{SO}_4)_2\text{O}$ , from Israel and the Palestine Autonomy, South Levant, and from South Ossetia, Greater Caucasus. *Mineralogical Magazine*, 81 (3), 499-513.
- Galuskin, E.V., Gfeller, F., Galuskina, I.O., Armbruster, T., Bailau, R., Sharygin, V.V. (2015) Mayenite supergroup, Part I: Recommended nomenclature for the mayenite supergroup: re-definition of mayenite and discreditation of brearleyite. *European Journal of Mineralogy*, 27, 99-111
- Galuskin, E.V., Galuskina, I.O., Kusz, J., Gfeller, F., Armbruster, T., Bailau, R., Dulski, M., Gazeev, V.M., Pertsev, N.N., Zadov, A.E. and P. Dzierzanowski (2015) Mayenite supergroup, Part II: Chlorkyuygenite from Northern Caucasus Kabardino-Balkaria, Russia, a new microporous mayenite supergroup mineral with "zeolitic"  $\text{H}_2\text{O}$ . *European Journal of Mineralogy*. 27, 113-122
- Galuskin, E.V., Gfeller, F., Armbruster, T., Galuskina, I.O., Vapnik, Ye., Dulski, M., Murashko, M., Dzierzanowski, P., Sharygin, V.V., Krivovichev, S.V., Wirth, R. (2015) Mayenite supergroup, Part III: Fluormayenite,  $\text{Ca}_{12}\text{Al}_{14}\text{O}_{32}[\square_4\text{F}_2]$ , and fluorkyuygenite,  $\text{Ca}_{12}\text{Al}_{14}\text{O}_{32}[(\text{H}_2\text{O})_4\text{F}_2]$ , two new minerals

of mayenite supergroup from pyrometamorphic rock of Hatrurim Complex. *European Journal of Mineralogy*, 27, 123-136

- Galuskina, I., Gfeller, F., Galuskin, E., Armbruster, T., Vapnik, Y., Dulski, M., Murashko, M. (2018). New minerals with modular structure derived from hatrurite from the pyrometamorphic rocks, part IV: Dargaite,  $\text{BaCa}_{12}(\text{SiO}_4)_4(\text{SO}_4)_2\text{O}_3$ , from Nahal Darga, Palestinian Autonomy. *Mineralogical Magazine*, doi:10.1180/minmag.2017.081.095
- Gfeller F. (2015): Mayenite  $\text{Ca}_{12}\text{Al}_{14}\text{O}_{32}[\text{X}^{-2}]$ : from minerals to the first stable electricle crystals. In: "*Highlights in Mineralogical Crystallography*". Thomas Armbruster, Rosa Danisi (Eds.), De Gruyter-Verlag Berlin.
- Gfeller, F., Armbruster, T., Galuskin, E. V., Galuskina, I. O., Lazic, B., Savelyeva, V. B., Gazeev, V. M. (2013): Crystal chemistry and hydrogen bonding of rustumite  $\text{Ca}_{10}(\text{Si}_2\text{O}_7)_2(\text{SiO}_4)(\text{OH})_2\text{Cl}_2$  with variable OH, Cl, F. *American Mineralogist*, 98(2-3), 493-500.
- Gfeller F. – Melko N. (2019): Mineralogische und chemische Untersuchung an gelben und roten römischen Ziegeln aus Wettswil und Umgebung. In: "*Römische Fundstellen im Knonauseramt*". Daniel Käch (Eds.), *Zürcher Archäologie*, 36 (im Druck).
- Gfeller, F., Środek, D., Kusz, J., Dulski, M., Gazeev, V., Galuskina, I.O., Galuskin, E.V., Armbruster, T. (2015): Mayenite supergroup, Part IV: Crystal structure and Raman investigation of Al-free eltyubuite from the Shadil-Khokh volcano, Kel' Plateau, Southern Ossetia, *European Journal of Mineralogy*, 27, 137-146
- Gfeller, F., Widmer R., Krüger B., Galuskin, E.V., Galuskina, I.O., Armbruster T. (2015): The crystal structure of flamite and its relation to  $\text{Ca}_2\text{SiO}_4$  polymorphs and nagelschmidite. *European Journal of Mineralogy*, doi:10.1127/ejm/2015/0027-2476
- Pakhomova, A. S., Danisi, R. M., Armbruster, T., Lazic, B., Gfeller, F., Krivovichev, S. V., & Yakovenchuk, V. N. (2013): Hightemperature induced dehydration, phase transition and exsolution in amicitite: A single-crystal X-ray study. *Microporous and Mesoporous Materials*, 182, 207-219.
- Widmer R., Gfeller F., Armbruster T. (2015): Structural and crystal chemical investigation of intermediate phases in the system  $\text{Ca}_2\text{SiO}_4 - \text{Ca}_3(\text{PO}_4)_2 - \text{CaNaPO}_4$ . *Journal of the American Ceramic Society*, 98 (12), 3956-3965