

Gokce K. Ustunisik, Ph.D.
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CURRENT POSITION: Assistant Professor, Department of Geology and Geological Engineering,
South Dakota Mines

EDUCATION:

Ph.D., Geology, (August 2009)

University of Cincinnati, Department of Geology, Cincinnati, Ohio *Advisor:* Prof. Attila Kilinc

Dissertation: “Application of Magma Recharge, Plagioclase Zoning, and Crystal Size Distribution (CSD) Theory to Natural Solid-Liquid Equilibria”

M.S., Geology (September 2004)

Ankara University, Department of Geological Engineering, Ankara, Turkey

M.S. Thesis: “Petrology and Geochemistry of Volcanic Rocks around Cubuk River Cubuk Dam”

B.S., Geological Engineering (June 2001)

Ankara University, Department of Geological Engineering, Ankara, Turkey

Senior Thesis: “Petrology and Geochemistry of Volcanic Rocks from Galatea Volcanic Province”

PROFESSIONAL EXPERIENCE:

2016 - Present Assistant Professor of Petrology (Tenure-Track)
South Dakota Mines, Department of Geology and Geological Engineering,
Rapid City, South Dakota

2016 - Present Research Associate
American Museum of Natural History, Department of Earth and Planetary
Sciences, New York, New York

2012 - 2016 Katherine Davis Research Fellow and Science Faculty in MAT Earth Science
American Museum of Natural History, Departments of Earth and Planetary
Sciences and Education, New York, New York

2012 - 2014 Visiting Research Scientist
Stony Brook University, Department of Geosciences, Stony Brook, New York

2009 - 2012 Post-Doctoral Research Associate
Stony Brook University, Department of Geosciences, Stony Brook, New York

2006 - 2008 Graduate Student Summer Research Fellow
University of Cincinnati, Department of Geology, Cincinnati, OH

2005 - 2009 Graduate Teaching Assistant
University of Cincinnati, Department of Geology, Cincinnati, OH

2001 - 2005 Graduate Research Assistant
Ankara University, Department of Geological Engineering, Ankara, Turkey

FUNDED GRANTS:

- 2020 - 2022 (**co-PI**) **NSF CBET-2033577**, “*NSF 2026: EAGER: Accelerated Carbon Mineralization Sequestration in Cation Rich Rock Formations via Microbial Augmentation and Stimulation*”, (w/B. Lingwall - SD Mines PI), (01/1/2020 - 12/31/2022)
- 2020 - 2023 (**PI**) **NSF EarthCube/ICER-2026916**, “*Collaborative Research: EarthCube Data Capabilities: A Data-Driven Modeling Infrastructure to Support Research and Education in Volcanology, Geochemistry and Petrology*”, (w/K. Lehnert - Columbia University PI, P. Antoshechkina - Caltech PI) (09/1/2020 - 8/31/2023)
- 2020 - 2022 (**PI**) ***SD Board of Regents Competitive Research Grant**, “*Understanding the Mantle Carbon Budget: Insights from Melt Inclusions - YEAR 2*”, (**PI**: Ustunisik) (08/22/2020 - 5/31/2022) (**\$25,000**)
- 2019 - 2022 (**PI**) **NSF OCE/MGG-1948838**, “*Collaborative Research: EarthChem & SESAR – Data Infrastructure for Geochemistry and Earth Science Samples Communities*”, (w/K. Lehnert - Columbia University PI) (05/1/2020 - 5/31/2022)
- 2020 - 2024 (**senior personnel**) **NSF MRI-2018626**, “*Materials Characterization Infrastructure for Energy and Environmental Research and Development*”, (w/G. Crawford - SD Mines PI), (01/1/2020 - 12/31/2022) (**\$N/A**)
- 2019 - 2021 (**PI**) **SD Board of Regents Competitive Research Grant**, “*Understanding the Mantle Carbon Budget: Insights from Melt Inclusions*”, (**PI**: Ustunisik) (08/22/2019 - 4/30/2021)
- 2017 - 2020 (**PI**) **NSF MGG/EAR-1636653**, “*Collaborative Research: IEDA 2016-2021: Operation of a Multi-Disciplinary Data Facility for the Earth Science Community*” (w/K. Lehnert - Columbia University PI) (5/1/2017 - 10/30/2020)
- 2016 - 2019 (**collaborator**) **NASA EW-NNX16AD37G**, “*Chemistry and Architecture of Meteorites: Constraints on Astrophysical Models and Ground Truth for Exploration*” (w/D. Ebel - AMNH PI) (2/1/2016 - 1/31/2019)

*= This second SD BOR grants is continuation of “*Understanding the Mantle Carbon Budget: Insights from Melt Inclusions*” 2019-2021 grant and evaluated by the SD BOR program managers following a new submission in 2020 in order to be approved for renewal.
Since it went through a new evaluation, they are listed separately.

AWARDS AND HONORS:

- Nominated as Full Member to Sigma Xi (2020 - Present)
- Faculty Professional Development Award, Research Office of South Dakota Mines (2020 - 2021)
- NSF-SERC Travel Award for Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career Workshop, SERC (2017)
- Katherine Davis Research Fellowship of the Masters in Art of Teaching (MAT) Earth Science program at the American Museum of Natural History (2012 - 2016)
- NASA-MFR and NASA-LASER Post-Doctoral Fellowship, Research Foundation of Stony Brook (2009 - 2012)
- Geology Alumni Distinguished Doctoral Fellowship, University of Cincinnati (2007 - 2008)
- Wycoff Fellowship, University of Cincinnati (2007 - 2008)
- Graduate Student Summer Research Fellowship, University of Cincinnati (2006 - 2008)
- Graduate Student Governance Association (GSGA) Summer Grant for Ph.D. Fieldwork, University of Cincinnati (2006)

- Geological Society of America (GSA) Student Travel Grant for Annual Meeting of GSA, Philadelphia (2005)
- President's Scholarships, Ankara University, Engineering Faculty (2004)
- TUBITAK (The Scientific and Technical Research Council of Turkey) Student Research Grant for Senior Thesis (1999 - 2001)

TEACHING:

Undergraduate:

- GEOL 341/341L (3credits) Igneous and Metamorphic Petrology (every Fall)
- GEOL 212/212L (3credits) Mineralogy and Crystallography (every Spring)
- GEOL 465 (3credits) Geology Senior Research II (Spring 2018 and 2021)

Graduate:

- GEOL 721/721L (3credits) Volcanology (Spring, Even)
- GEOL 744 (3credits) Planetary Geology (Spring, Odd)
- GEOL 790 (1credit) Volcanology Seminar (co-taught with Tim Masterlark) (Fall 2018)
- GEOL 691/791 (3credits) IND. Study "Advanced Igneous and Metamorphic Petrology" (Spring 2017)

ADVISING AND MENTORING:

Advising at SD Mines:

Post-Docs:

- Jay Tung (Spring 2019)

Graduate Students:

As major professor:

- John Hewitt, Accelerated MS in Geology, (Fall 2021 - Present)
- Erica Cung, MS in Geology, (Fall 2020 - Present)
- Max Ehrenfels (Exchange MS student from Germany, only during Fall 2019)
- Kristen Lewis, MS in Geology, (Fall 2018 - Spring 2020)
- Taran Bradley, MS in Geology, (Spring 2018 - Spring 2020)
- Alexander Rogaski MS in Geology, (Fall 2017 - Spring 2019)

As committee member:

- Dipayan Samantha (Summer 2021 - Present, PhD in Chemical and Biological Engineering, Advisor: Sani, R.)
- Linh Thai Duong (Spring 2019 - Present, PhD in Civil and Environmental Engineering, Advisor: Shearer, C.)
- Nikhil Pokharel (Fall 2019 - Spring 2021, PhD in Nano Science and Nano Engineering, Advisor: Ahrenkeil, P.)
- Jared Fox (Fall 2018 - Fall 2020, MS in Geology, Advisor: Masterlark, T.)
- Cody Stock (Spring 2017 - Spring 2019, MS in Geology, Advisor: Baran, Z.)
- Houston Wagner (Spring 2017 - Deceased, MS in Geology, Advisor: Baran, Z.)
- Michael Day (Spring 2017 - Fall 2020, MS in Geology, Advisor: Duke, E.)

Undergraduate Advisees:

Undergraduate Academic Advisees:

- Corin Marie Craig (Fall 2021 - Present)

- Beth Reghan Deboer (Fall 2021 - Present)
- Ava Sophia Jenkins (Fall 2021 - Present)
- Dylan Brock Lau (Fall 2021 - Present)
- Morgan Nystuen (Fall 2021 - Present)
- Tristan Greisch (Fall 2019 - Present)
- Elizabeth Secrest (Fall 2019 - Present)
- Samantha Schmidt (Fall 2019 - Present)
- Alice Morris (Fall 2019 - Present)
- Corrine Cranor (Fall 2019 - Present)
- Gage Koistinen (Fall 2017 - Spring 2021)
- Benjamin Stec (Fall 2017 - Spring 2021)
- John Hewitt (Fall 2017 - Spring 2021)
- Desiray Wilson (Fall 2017 - Spring 2020)
- Brittanie Wratford (Fall 2017 - Spring 2020)
- Thomas Stasiak (Fall 2017 - Fall 2018)
- Andrew Kiernan (Fall 2017 - Fall 2018)
- Justin Ketel (Fall 2017 - Fall 2018)
- Cameron Haslam (Fall 2017 - Fall 2018)

Undergraduate Research Advisees:

- Amelia VanWinkle (Fall 2021)
- Colton Mumma (Spring 2021)
- John Hewitt (Fall 2020 - Spring 2021) - Senior Thesis
- Zachary Berghorst (Fall 2017 - Spring 2018) - Senior Thesis

Advising at American Museum of Natural History:

Graduate Students:

- “Rebecca Saunders” and “Richard Weiss”, Summer 2015, Bulk Composition Comparisons of Amphibolites Intercalated within Schist Units in New York City
- “Kevin Gostomski” and “Danny Rosenstein”, Summer 2015, Bulk Composition Comparisons of Schist and Phyllite Units in New York City and the Manhattan Prong
- “David Wicks”, Summer 2014, A Mineralogical and Petrological Study of Red and Green Feldspars in Harriman State Park, NY
- “Jaime DiPuppo”, Summer 2014, Analysis of Apatites, Monazites, and Amphiboles in Sulfide Deposits in Phillips Mine, Garrison NY
- “Sarah Marks”, Summer 2014, An Examination of Tourmaline in Southern Central Park, New York City
- “Zachary Trunkely”, Summer 2014, Mineralogical Analysis of Altered Stockton Formation Below the Contact of the Jurassic Palisades Sill Intrusion, Fort Lee, New Jersey)
- “Tyler Lyons” and “Reid Sherman”, Summer 2013, Mineralogical Analysis of a Meta-Sedimentary Rock from the Palisades Sill-Stockton Formation Contact
- “John Patrick Clark”, Summer 2013, Significant Differences in Tourmaline Compositions Over Small Distances
- “Karl Clarke”, Summer 2013, An Investigation of Tourmaline’s Appearance in Three Geological Areas across New York City

Mentoring at Stony Brook University:

Graduate Students:

- “Cong Pan”, PhD Candidate, Stony Brook University, Spring 2012 (Training in Experimental Petrology Lab)
- “Andrew Kay”, PhD Candidate, Stony Brook University, Fall 2011 (Training for Semester Research Project)

SERVICE:

Service to Profession:

- Lead of IEDA traceDs (2018 - Present)
- Lead of IEDA Library of Experimental Relationships (LEPR) (2018 - Present)
- IEDA Advisory Committee (traceDs) (2018 - Present)
- Member of Lunar and Planetary Institute (LPI) Organizing Committee for Conferences
 - Invited to review abstracts and organize sessions for 49th LPSC (2018)
 - Invited to review abstracts and organized sessions for 48th LPSC (2017)
- Organized and chaired special sessions at AGU and LPS meetings (2016 - Present)
 - Session Chair - Special Session on “Minerals, Melts, Fluids, and Mixtures: Unraveling Magmatic Processes from the Petrologic Record” at AGU Fall Meeting 2019 (with Rowe M., Tepley, F., Pamukcu A. Moore L.)
 - Session Chair - Session on “Chondrites and Their Components: Parent Body Processes” at 49th LPSC 2018 (with Simon J.)
 - Session Chair - Session on “CAIs, Chondrules, and Early Processes” at 48th LPSC 2017 (with Ebel D.S.)
 - Session Chair - Special Session on “Experimental Planetary Geochemistry - Simulating Planetary Processes on the Moon, Mars and other Rocky Bodies in the Solar System” at AGU Fall Meeting 2016 (with DiFrancesco N. and Dehouck E.)
 - Session Chair - Special Session on “Mars System Science: Integrating Martian Planetary Processes from the Subsurface to the Surface” at AGU Fall Meeting 2011 (with Nekvasil H. and Sharp T.H.)
- Led workshop to train Mineralogical Society of America (MSA) experimental petrologist community on the traceDs database under EarthChem Lamont initiative (April 2021)
- NASA Postdoctoral Program (NPP) Proposal Reviewer
 - July 2018 and 2019 cycles
 - March 2018 cycles
 - November 2016 cycles
- Judge for Student Presentation Awards in Conferences
 - Outstanding Student Paper Award (OSPA) Judge at AGU Fall Meeting (2016, 2018, 2019)
 - Stephen E. Dworkin Planetary Geoscience Student Award Judge at LPSC (2017, 2018, 2019)
- Graduate Student Mentor in Conferences
 - Mentored graduate students at Goldschmidt Meeting (2014)
- Reviewer for Journals
 - Geochimica Cosmochimica Acta
 - America Mineralogist
 - Journal of Volcanology and Geothermal Research
 - Journal of Petrology
 - Journal of Geophysical Research
 - Minerals
 - Geosciences
- Member of Professional Organizations

- Sigma Xi
- American Geophysical Union (AGU)
- Geological society of America (GSA)
- Mineralogical society of America (MSA)

Service to Institution:

SD Mines Service:

University:

- University Research Committee (2020 - Present)
- Faculty Senate (2019 - 2020)
- Head Evaluation Committee (2017-2018)

Department:

- GGE Department Seminar Co-Coordinator with K. Katzenstein, C. Price (2021 - Present)
- Chair Peer Review of Teaching of Kevin Ward (Spring 2021)
- GEOL Structural Geology/Tectonics Search Committee (2020 - 2021)
- GGE Department Advisor for Women in Science and Engineering (WiSE) (2017 - Present)
- Member of Peer Review of Teaching of Liangping Li (Chair: Larry Stetler) (Spring 2019)
- Member of Peer Review of Teaching Larry Stetler (Chair: Lianping Li) (Spring 2022)
- GEOL Lab Safety Committee (2017 - 2019)
- GEOL BS Program Committee (2019 - Present)
- GGE Scholarship/Fellowship Committee (2016 - Present)
- GEOL/GEOE Graduate Application Screening Committee (2017 - Present)
- GGE Graduate Programs/Recruiting Committee (2016 - 2021)
- GGE Space Committee (2016 - 2017)
- Go to Mines Recruitment Activity (Fall 2017, Spring 2018, Fall 2021)
- Meet with freshman and transfer students at the beginning of every Fall semester (Fall 2016 - Present)

American Museum of Natural History (AMNH) Service:

Department:

- Master of Arts in Teaching (MAT) Earth Science Program Admissions Committee - review applicants and conduct interviews during Cohorts 2013, 2014, 2015
- Seminar Chair at AMNH Department of Earth and Planetary Sciences - organize weekly research seminars by inviting speakers and dealing with the logistics of their trips 2013 - 2014

Service to Community-At-Large:

- Member of STEM Tribal College committee (2020 - Present)
- Member of Tiospaye Organization (2021 - Present)

INVITED TALKS and COLLOQUIA:

- “Crustal Evolution of Planetary Bodies and their Volatiles: Linking Observations and Experiments - A New Wet Moon”, Texas A&M, College Station, Texas
- “Crustal Evolution of Planetary Bodies and their Volatiles: Linking Observations and Experiments”, South Dakota School of Mines and Technology, Rapid City, South Dakota
- “A New Wet Moon: Experimental Investigations into Planetary Volatiles”, Queens College, New York, NY

- “From a Wet Moon to the Stability of First Solids in the Solar System: Experimental Investigations into Planetary Volatiles”, AMNH, New York, NY
- “From a Wet Moon to the Stability of First Solids in the Solar System: Experimental Investigations into Planetary Volatiles”, Rensselaer Polytechnic Institute, Troy, NY
- “A New Wet Moon: How Wet is Wet?”, University of Wisconsin, River Falls, WI
- “Petrologic Explorations in Earth and Planetary Sciences”, Ball State University

PUBLICATIONS:

Peer-Reviewed Journal Articles (Total: 24; 21 Published, 3 Under Review; First- author: 10):

(Note that graduate student/post-doc authors are indicated with * and corresponding author is underlined.)

1. **Ustunisik, G.**, Nielsen, R. L., and Walker, D. (**Under Review** in Geochemistry Geophysics Geosystems) Experimental Investigation of the Phase Equilibria of Plagioclase Ultraphyric Basalts (PUBs).
2. Bradley, T. *, **Ustunisik, G.**, Duke, E. F., Unluer, A.T.*, Yildirim, D.K., and Flores, K. F. (**Under Review** in Lithos) Qualitative Barometry of High P/T Rocks with Field Based NIR Spectroscopy of White Mica.
3. **Onal, M.**, Daglar, S., **Ustunisik, G.**, Pekdemir, A. D., and Sarikaya, Y. (**Under Review** in Silicon) Thermal Crystallization Kinetics of an Opal-like Biogenic Silica.
4. Bayram, H., **Ustunisik, G.**, **Onal, M.**, and Sarikaya, Y. (**In-Press**, *Clay Minerals*) Optimization of Bleaching Power by Sulphuric Acid Activation of Bentonite. [**Impact factor 1.361**]
5. Kosan, I., **Ustunisik, G.**, **Onal, M.**, Sarikaya, Y., and Acar, P. (2021) Irreversible Ammonia Adsorption on Asphaltite Bottom Ash: A Thermodynamic Approach. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 126933. <https://doi.org/10.1016/j.colsurfa.2021.126933>. [**Impact factor 4.539**]
6. Lewis, K. *, **Ustunisik, G.**, and Nielsen, R.L. (2021) Experimental Constraints on Homogenization of Plagioclase-Hosted Melt Inclusions from Plagioclase Ultraphyric Basalts. *Frontiers in Earth Science - Crystal Archives of Magmatic Processes*, V.8, 673, <https://doi.org/10.3389/feart.2020.584371>. [**Impact factor 3.498**]
7. **Rose-Koga, E.F.**, Bouvier, A.S., Gaetani, G.A., Wallace, P.J., Allison, C., Andrys, J.A., Angeles de la Torre, C.A., Barth, A., Bodnar, R.J., Bracco Gartner, A.J.J., Butters, D., Castillejo, A., Chilson-Parks, B., Choudhary, B. R., Cluzel, N., Cole, M., Cottrell, E., Daly, A., Danyushevsky, L.V., DeVitre, C.L., Drignon, M.J., France, L., Gaborieau, M., Garcia, M.O., Gatti, E., Genske, F.S., Hartley, M.E., Hughes, E., Iveson, A.A., Johnson, E.R., Jones, M., Kagoshima, T., Katzir, Y., Kawaguchi, M., Kawamoto, T., Kelley, K.A., Koornneef, J.M., Kurz, M.D., Laubier, M., Layne, G.D., Lerner, A., Lin, K-Y., Liu, P., Lorenzo-Merino, A., Luciani, N., Magalhães, N., Marschall, H.R., Michael, P.J., Monteleone, B.D., Moore, L.R., Moussallam, Y., Muth, M., Myers, M.L., Narvaez D.F., Navon, O., Newcombe, M.E., Nichols, A.R.L., Nielsen, R.L., Pamukcu, A., Plank, T., Rasmussen, D.J., Roberge, J., Schiavi, F., Schwartz, D.M., Shimizu, Kei, Shimizu, K., Shimizu, N., Thomas, J.B., Thompson, G., Tucker, J.M., **Ustunisik, G.**, Waelkens, C., Zhang, Y., and Zhou, T. (2021) Silicate Melt Inclusions in the New Millennium: A Review of Recommended Practices for Preparation, Analysis, and Data Presentation. *Chemical Geology*, V.570, 120-145, <https://doi.org/10.1016/j.chemgeo.2021.120145>. [**Impact factor 4.015**]

Please note that this is a collaborative paper from Melt Inclusions Workshop held in Woods Hole Oceanography Institute during the 2018 Goldschmidt Meeting. The organizers of the workshop are the first couple authors and the remaining are poster or

oral presenters. Authors are in alphabetical order based on the last name and contributed to the content equally.

8. **Nielsen, R.L., Ustunisik, G., Lange, A., Tepley III, F.J., and Kent, A.J.R. (2020)** Trace Element and Isotopic Characteristics of Plagioclase Megacrysts in MORB Plagioclases Ultraphyric Basalts (PUBs). *Geochemistry Geophysics Geosystems*, V.21, <https://doi.org/10.1029/2019GC008638>. [Impact factor 3.447]
9. **Ustunisik, G., Ebel, D.S., Walker, D., Nielsen, R.L., and Gemma, M.* (2019)** Trace Element Partitioning Between CAI-Type Melts and Grossite, Melilite, Hibonite, and Olivine. *Geochimica Cosmochimica Acta*, V.267(9), 124-146, <https://doi.org/10.1016/j.gca.2019.08.038>. [Impact factor 4.659]
10. **McCubbin, F. M. and Ustunisik, G. (2018)** Experimental Investigation of F and Cl Partitioning between Apatite and Fe-rich Basaltic Melt at 0 GPa and 950-1050°C: Evidence for Steric Controls on Apatite-Melt Exchange Equilibria Resulting from Non-Ideal Mixing of F and Cl in OH-poor Apatite. *American Mineralogist*, V.103 (9), 1455-1467, <https://doi.org/10.2138/am-2018-633>. [Impact factor 3.003]
11. **Nielsen, R.L., Ustunisik, G., Weinsteiger, A. B., Tepley III, F. J., Johnston, D., and Kent, A.J.R. (2017)** Trace Element Partitioning between Plagioclase and Melt: An Investigation of the Impact of Experimental and Analytical Procedures. *Geochemistry Geophysics Geosystems*, V.18, 3359–3384, <https://doi.org/10.1002/2017GC007080>. [Impact factor 3.447]
12. **Ustunisik, G., Loewen, M., Nielsen, R., and Tepley III, F. J. (2016)** Magma Chamber Dynamics as Documented in a Single Eruptive Unit from Mt. Jefferson, Central Oregon Cascades. *Geochemistry Geophysics Geosystems*, V.17, 3469–3487, <https://doi.org/10.1002/2016GC006297>. [Impact factor 3.447]
13. **Ustunisik, G.*, Nekvasil, H., Lindsley, D., and McCubbin, F.M. (2015)** Degassing Pathways of Cl-, F-, H₂O-, and S- Bearing Magmas Near the Lunar Surface: Implications for the Composition and Cl Isotopic Signatures of Lunar Apatite. The Lunar Highlands Revisited: New Results and Proceedings of the Second Conference on the Lunar Highlands Crust. *American Mineralogist*, V. 100(8), 1717-1727, <https://doi.org/10.2138/am-2015-4883>. [Impact factor 3.003]
14. **DiFrancesco, N.J.*, Nekvasil, H., Lindsley, D., and Ustunisik, G.*, (2015)** Low Pressure Crystallization of a Volatile-Rich Lunar Basalt: A Means for Producing Local Anorthosites. *American Mineralogist*, V.100, 983-990, <https://doi.org/10.2138/am-2015-4885>. [Impact factor 3.003]
15. **Ustunisik, G.*, Ebel, D.S., Walker, D., and Boesenberg, J.S. (2014)** Experimental Investigation of Condensation Predictions for Dust-Enriched Systems. *Geochimica Cosmochimica Acta*, <https://doi.org/10.1016/j.gca.2014.07.029>. [Impact factor 4.659]
16. **Ustunisik, G. *, Kilinc, A., and Nielsen, R.L. (2014)** New Insights into the Processes Controlling Compositional Zoning in Plagioclase. *Lithos*, V.200-201, 80-93, <https://doi.org/10.1016/j.lithos.2014.03.021>. [Impact factor 3.93]
17. **Hughes, J., Nekvasil, H., Ustunisik, G.*, Lindsley, D., Coraor, A.*, Vaughn, J., Philips, B., McCubbin, F, and Woerner, W.* (2014)** Solid Solution in the Fluorapatite - Chlorapatite Binary System: High-Precision Crystal Structure Refinements of a Synthetic F-Cl Apatite. *American Mineralogist*, V.99, 369-376, <https://doi.org/10.2138/am.2014.4644>. [Impact factor 3.003]
18. **Hovis, G. L., McCubbin, F. M., Nekvasil, H., Ustunisik, G.*, Woerner, W. *, and Lindsley, D. H. (2014)** A Novel Technique for Fluorapatite Synthesis and the Thermodynamic Mixing Behavior of F-OH Apatite Crystalline Solutions. *American Mineralogist*, V.99, 890-897, <https://doi.org/10.2138/am.2014.4750>. [Impact factor 3.003]

19. Nadeau, P. A.*, Flores, K. E.*, **Ustunisik, G.***, Zirakparvar, N. A.*, Grceвич, A.*, Pagnotta, A.*, Sessa, J.A. *, Kinzler, R. J., MacDonald, M., Mathez, E., and Mac Low, M. (2013) Pilot Program for Teaching Earth Science in New York. *EOS*, V. 94, 205-106, <https://doi.org/10.1002/2013EO230001>. [Impact factor 1.412]
20. **Yildirim, K. D.***, Kilinc, A., Suner, F., Kumral, M., **Ustunisik, G. ***, and Budakoglu, M. (2012) Origin of Galena and Sphalerite Mineralization in the Koru Volcanics, Biga Peninsula, Turkey: Insights from MELTS Modeling and SUPCRT Calculations. *International Geology Review*, V. 55, 830-841, <https://doi.org/10.1080/00206814.2012.744441>. [Impact factor: 3.657]
21. **Ustunisik, G.***, Nekvasil, H., and Lindsley, D. H., (2011) Differential Degassing of H₂O, Cl, F, and S: Potential Effects on Lunar Apatite. *American Mineralogist Letters*, V.96, 1650-1653, <https://doi.org/10.2138/am.2011.3851>. [Impact factor 3.003]
22. **Ustunisik, G.*** and Kilinc, A. (2011) The Role of Fractional Crystallization, Magma Recharge, and Magma Mixing in the Differentiation of the Small Hasandag Volcano, Central Anatolia, Turkey. *Lithos*, V. 125, 984-993, <https://doi.org/10.1016/j.lithos.2011.05.013>. [Impact factor 3.93]
23. Yener, M., Onal, M., **Ustunisik, G*.**, and **Sarikaya, Y.** (2007) Thermal Behavior of a Mineral Mixture of Sepiolite and Dolomite. *Journal of Thermal Analysis and Calorimetry*, V. 88-3, 813-817, <https://doi.org/10.1007/s10973-005-7459-0>. [Impact factor 4.626]
24. Bayram, H., Onal, M., **Ustunisik, G.***, and **Sarikaya, Y.** (2007) Some Thermal Characteristics of a Mineral Mixture of Palygorskite, Metahalloysite, Magnesite, and Dolomite. *Journal of Thermal Analysis and Calorimetry*, V. 89-1, 169-174, <https://doi.org/10.1007/s10973-006-7561-y>. [Impact factor 4.626]

White Papers (Total: 22; First-author: 12):

(Two pages extended abstracts; find at,

<http://www.lpi.usra.edu/meetings/lpsc20xx/pdf/abs#.pdf>)

(Note that graduate student/post-doc authors are indicated with *.)

1. Rogaski A.*, **Ustunisik, G.**, Yang, S.*, and Humayun, M. (2019) Volatilization of Germanium, Zinc, and Lithium in Martian Basalts and Associated Surface Alteration during Fumarolic Degassing, In 50th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 2132*, Abs. #2864.
2. **Ustunisik, G.**, DiFrancesco, N.*, Yang, S. *, Humayun, M., and Rogaski A.* (2018) Role of Cl and S on the Volatility of Ge, Zn, and Li in Martian Basaltic Magmas: Implications for Volatile Contribution to Martian Surface Lithologies, In 49th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 2883*, Abs. #2659.
3. **Ustunisik, G.**, Ebel, D., and Walker, D. (2017) An Experimental Study of Dissolution, Fe-Mg Exchange and Zoning between Relict Forsterite and Chondrule Melt: Implications for Thermal Histories of Chondrules, In 48th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1964*, Abs. #2907.
4. **Ustunisik, G.**, Ebel, D., and Walker, D. (2016) Temperature and Compositional Controls on Trace and REE Partitioning Between CAI-Type Melts and Grossite, Melilite, Hibonite, and Olivine: Insights from Isothermal Crystallization Experiments, In 47th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1903*, Abs. #2406.
5. McCubbin, F.M., **Ustunisik, G.**, and Vander Kaaden, K.E. (2016) Apatite-Melt Partitioning at 1 Bar: An Assessment of Apatite-Melt Exchange Equilibria Resulting from Non-Ideal Mixing of F and Cl In Apatite, In 47th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1903*, Abs. #1184.

6. **Ustunisik, G.***, Ebel, D., and Walker, D. (2015) An Experimental Study of Trace and Rare Earth Element (REE) Partitioning between CAI-Type Melts and Grossite: Implications for Processes during CAI Formation, In 46th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1832*, Abs. #2051.
7. **Ustunisik, G.***, Ebel, D., Walker, D., and Boesenberg, J. (2014) Experimental Investigation of Condensation Predictions for Dust-Enriched Systems, In 45th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1777*, Abs. #1212.
8. **Ustunisik, G.***, Ebel, D., and Nekvasil, H. (2014) Vapor Evolution during Degassing of Alkalis in Cl- Free and Cl-Bearing Melts: Experimental Insights into Chondrule Formation, In 45th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1777*, Abs. #2171.
9. McCubbin, F.M., Vander Kaaden, K.E.*, Tartèse, R., Whitson, E. S., Anand, M., Franchi, I.A., Mikhail, S., **Ustunisik, G. ***, Hauri, E.H., Wang, J., and Boyce, J.W. (2014) Apatite-Melt Partitioning in Basaltic Magmas: The Importance of Exchange Equilibria and the Incompatibility of the OH Component in Halogen-Rich Apatite, In 45th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1777*, Abs. #2741
10. DiFrancesco, N.*, Nekvasil, H., Lindsley, D.H, and **Ustunisik, G.*** (2014) Low Pressure Crystallization of a Lunar Highlands Basalt: A Means for Producing Anorthosite Locally, In 45th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1777*, Abs. # 1893.
11. **Ustunisik, G.***, Ebel, D., and Nekvasil, H. (2013) Exploring the Role of Chlorine on the Degassing of Alkalis (Na and K): Implications for Chondrule Formation, In 44th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1719*, Abs. # 2145.
12. **Ustunisik, G.***, Ebel, D., and Boesenberg, J. (2013) Experimental Confirmation of Predicted Condensed Phase Assemblages in Dust-Enriched Systems, In 44th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1719*, Abs. # 2260.
13. Nekvasil, H., Coraor, A.E.*, DiFrancesco, N.*, Lindsley, D. H., and **Ustunisik, G.*** (2013) Alkali Depletion of the Bulk Moon: Is it Required?, In 44th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1719*, Abs. # 2830.
14. DiFrancesco, N.*, Nekvasil, H., **Ustunisik, G.***, and Lindsley, D.H. (2013) Evolved Melts from Lunar Highlands Basalts: Can They Produce Lunar Granites?, In 44th Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1719*, Abs. # 2619.
15. **Ustunisik, G.***, Nekvasil, H., Lindsley, D. H., and McCubbin, F.M. (2012) Vapor Phase Evolution During Sequential Degassing of Cl-, F-, H₂O- and S-Bearing Lunar Magmas: Insights From Time Studies, In 43rd Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1659*, Abs. # 1879.
16. Nekvasil, H., **Ustunisik, G.***, and Lindsley, D. H. (2012) Large Scale Lunar Magmatism: Inferences From the Moscoviense Basin, In 43rd Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1659*, Abs. # 2178.
17. Nekvasil, H., **Ustunisik, G.**, and Lindsley, D. H. (2012) Degassing of Volatile-Bearing Martian Magma into A CO₂-Rich Atmosphere, In 43rd Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1659*, Abs. # 2640.
18. **Ustunisik, G.***, Nekvasil, H., and Lindsley, D. H. (2011) Experimental Determination of Degassing Pathways from Lunar Magmas: New Insights from Time Studies, In *A wet vs. Dry Moon: Exploring Volatile Reservoirs and Implications for the Evolution of the Moon and Future Exploration Contribution No. 1621*, Abs. # 6018.

19. Nekvasil, H., McCubbin, F.M., and **Ustunisik, G.*** (2011) Magmatic Degassing in Planetary Bodies: What Apatite Can Tell Us?, In 42nd Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1608*, Abs. # 2240.
20. **Ustunisik, G.***, Nekvasil, H., and Lindsley, D. H. (2011) Exploring the Effect of Cl, F, H₂O, and S during Experimental Degassing of Lunar Magmas, In 42nd Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1608*, Abs. # 2643.
21. Nekvasil, H., **Ustunisik, G.***, McCubbin, F.M.*, and Lindsley, D. H. (2010) Experimental Simulation of Magmatic Hydrothermal Activity on Mars: I. High Temperature Alteration in the Presence of a Cl- and S- Enriched Fluid, In 41st Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1533*, Abs. # 1774.
22. **Ustunisik, G.***, Nekvasil, H., McCubbin, F.M.*, and Lindsley, D. H. (2010) The Effect of S and Cl on Mineral Stability in Martian Magma, In 41st Lunar and Planetary Science Conference, *Lunar and Planetary Institute Contribution No. 1533*, Abs. # 1761.

CONFERENCE PRESENTATIONS (ORAL/POSTER) (Total: 64; First-author: 24):

(Note that graduate student/post-doc authors are indicated with *.)

2021:

1. Cung, E.*, **Ustunisik, G.**, and Nielsen, R. L., “Quantitative Analysis of Trace Element Partitioning Data for Clinopyroxene, Garnet, and Amphibole Using Statistical Methods” Submitted to be Presented at American Geophysical Union (AGU) Fall Meeting, New Orleans, LA (December 13-17, 2021).
2. Hewitt, J. B.*, **Ustunisik, G.**, and Nielsen, R. L., “Petrogenesis of Plagioclase Ultraphyric Basalts (PUB) from the NE Pacific Ridge System: Evidence from Mineral Textures and Trace Element Characteristics” Submitted to be Presented at American Geophysical Union (AGU) Fall Meeting, New Orleans, LA (December 13-17, 2021).
3. Dygert, N., **Ustunisik, G.**, Lewis, K.*, and Nielsen, R. L., “Application of a Eu-in-Plagioclase-Melt Oxybarometer to Phenocryst-Host Pairs and Melt Inclusions in MORBs Reveals Resolvable Heterogeneity in Oxygen Fugacity” Submitted to be Presented at American Geophysical Union (AGU) Fall Meeting, New Orleans, LA (December 13-17, 2021).
4. Cung, E.*, **Ustunisik, G.**, and Nielsen, R. L., “Impact of Database Characteristic on Trace Element Partitioning Models for Clinopyroxene” Accepted to be Presented at Annual Meeting of the Geological Society of America (GSA), Portland, OR (October 10-13, 2021).
5. Hewitt, J. B.*, **Ustunisik, G.**, and Nielsen, R. L., “Textural and Compositional Features of Plagioclase and Mafic Phases of Plagioclase Ultraphyric Basalts (PUB) from the NE Pacific Ridge System” Accepted to be Presented at Annual Meeting of the Geological Society of America (GSA), Portland, OR (October 10-13, 2021).
6. Govil, T.*, Vaughn, M.*, Soeder, D., **Ustunisik, G.**, Lingwall, B., and Sani, R., “CO₂ Solutions - Driven by Enzyme-Enabled Carbon Capture” Presentation at 71th Annual Meeting of Society for Industrial Microbiology and Biotechnology (SIMB), Austin, TX (August 8-11, 2021).

2020:

7. **Ustunisik, G.**, Nielsen, R. L., and Walker D., “The Missing Magmas of MOR” Presentation at Virtual Goldschmidt Conference, Honolulu, HI (June 21-26, 2020).
8. Nielsen, R. L. and **Ustunisik, G.**, “An Alternate Perspective: Plagioclase Megacrysts and their Inclusions” Presentation at Virtual Goldschmidt Conference, Honolulu, HI (June 21-26, 2020).
9. Lewis, K.*, **Ustunisik, G.**, and Nielsen, R. L., “Experimental Constraints on the Homogenization of Plagioclase Hosted Melt Inclusions from Plagioclase Ultraphyric Basalts” Presentation at Virtual Goldschmidt Conference, Honolulu, HI (June 21-26, 2020).

10. Lehnert, K.A., Antoshechkina, P., Block, K., Ghiorso, M., Grossberg, M., Ji, P., Nielsen, R. L., Profeta, L., **Ustunisik, G.**, Walker D, and Wolf A., “Next Generation Cyberinfrastructure for Geochemistry & Petrology: Connecting Data (EarthChem) and Models (ENKI)” Presentation at Virtual Goldschmidt Conference, Honolulu, HI (June 21-26, 2020).

2019:

11. **Ustunisik, G.**, Nielsen, R. L., and Walker D., “Experimental Investigation of the Phase Equilibria of Plagioclase Ultraphyric Basalts (PUBs)” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 9-13, 2019).
12. Lewis, K.* , **Ustunisik, G.**, and Nielsen, R. L., “Experimental Constraints on the Homogenization of Plagioclase Hosted Melt Inclusions from Plagioclase Ultraphyric Basalts” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 9-13, 2019).
13. Bradley, T.* , **Ustunisik G.**, Duke, E., Flores, K., Unluer, A.T.* , and Yildirim, D., “Detecting the Pressure and Bulk Composition Effect on the Al-OH Absorption Band of White Micas: A Case Study in Northwest Turkey and Applications to the Guatemala Suture Zone” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 9-13, 2019).

2018:

14. **Ustunisik, G.**, Nielsen, R.L., and Walker, D., “Phase Equilibria Experiments on Anorthitic Megacrysts and Their Melt Inclusions in Plagioclase Ultraphyric Basalts (PUBs)” Presentation at American Geophysical Union (AGU) Fall Meeting, Washington, DC (December 10-14, 2018).
15. Rogaski A.* , **Ustunisik, G.**, Yang, S., and Humayun, M., “Experimental Constraint of the Volatility of Germanium, Zinc, and Lithium in Martian Basalts and the Role of Degassing in Alteration of Surface Lithologies” Presentation at American Geophysical Union (AGU) Fall Meeting, Washington, DC (December 10-14, 2018).
16. Bradley, T*., **Ustunisik, G.**, Duke, E.F., and Flores, K., “Detecting the Pressure and Bulk Composition Effect on the Al-OH Absorption Band of White Micas: Case Studies in Northwest Turkey and the Franciscan Complex of California” Presentation at American Geophysical Union (AGU) Fall Meeting, Washington, DC (December 10-14, 2018).
17. Tung, S.* , **Ustunisik, G.**, and Nielsen, R.L., “Potential Consequences of the Compositional Distribution of Trace Element Partitioning Experiments” Presentation at American Geophysical Union (AGU) Fall Meeting, Washington, DC (December 10-14, 2018).
18. Masterlark, T., Tung, S*., **Ustunisik, G.**, and Baranowski, M.* , “Impulse-Response Experiments for Integrating Space-borne, Field, and Laboratory Measurements of Magmatic Systems” Presentation at American Geophysical Union (AGU) Chapman Conference, Quinamavida, Maule Region, Chile (January 7-12, 2018).

2017:

19. **Ustunisik, G.**, Nielsen, R.L., and Walker, D., “Phase Equilibria of Plagioclase Ultraphyric Basalts: Constraints from High-Pressure Experiments” Presentation at Annual Meeting of the Geological Society of America (GSA), Seattle, WA (October 22-25, 2017).
20. McCubbin, F.M., Barnes, J., Vander Kaaden, K.E., Boyce, J.W., **Ustunisik, G.**, and Witson, E.S., “Experimental Constraints on the Partitioning Behavior of F, Cl, and OH between Apatite and Basaltic Melt” Presentation at Annual Meeting of the Geological Society of America (GSA), Seattle, WA (October 22-25, 2017).

2016:

21. **Ustunisik, G.**, Ebel, D., and Walker, D., “Temperature and Time Constraints on Dissolution, Fe-Mg Exchange and Zoning between Relict Forsterite and Chondrule Melt - Implications for Thermal History of Chondrules” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 12-16, 2016).

2015:

22. **Ustunisik, G.***, Nekvasil, H., Lindsley, D.H., McCubbin, F.M., “Degassing Pathways of Cl-, F-, H-, and S-Bearing Magmas near the Lunar Surface: Implications for the Composition and Cl Isotopic Values of Lunar Apatite” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 14-18, 2015).
23. **Ustunisik, G.*** and Zirakparvar, A.*, “Museum-Based Urban Teacher Residency Program’s Approach to Strengthening the STEM Pipeline: Channeling Highly Qualified Earth Science Teachers into High Needs Schools” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 14-18, 2015).
24. **Ustunisik, G.*** and Nielsen, R.L., “Magma Chamber Dynamics as Documented in a Single Eruptive Unit from Mt. Jefferson, Central Oregon Cascades” Presentation at Annual Meeting of the Geological Society of America (GSA), Baltimore, MD (October 31-November 4, 2015).
25. Ebel, D.S., Kinzler, R.J., Harlow, G.E., Webster, J.D., Sessa, J.*, Nadeau, P.*, and **Ustunisik, G.***, “Field and Lab Practicum Provides Tools to Inspire Geoscience Classroom Learning” Presentation at Annual Meeting of the Geological Society of America (GSA), Baltimore, MD (October 31-November 4, 2015).

2014:

26. **Ustunisik, G.***, Ebel, D., and Nekvasil, H., “Experimental Constraints on Alkali Volatilization During Chondrule Formation: Implications for Early Solar System Heterogeneity” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 14-19, 2014).
27. **Ustunisik, G.***, Ebel, D., and Nekvasil, H., “The Role of Chlorine in the Degassing of Alkalies During Flash Melting of Chondrules” Presentation at Goldschmidt Conference, Sacramento, CA (June 8-13, 2014).
28. **Ustunisik, G.*** and Nielsen, R.L., “Magma Storage and Eruption Dynamics of an Individual Eruptive Unit at Mt Jefferson, Oregon” Presentation at Goldschmidt Conference, Sacramento, California (June 8-13, 2014), Presentation at Goldschmidt Conference, Sacramento, CA (June 8-13, 2014).

2013:

29. Nadeau, T.*, Ebel, D.S., Harlow, G.E., Landman, N.H., Pagnotta, A.*, Sessa, J.*, Shara, M., **Ustunisik, G.***, Webster, J.D., Blair, D., and Shumer, M.*, “Putting Teachers-To-Be in the Field and the Lab: Hands-On Research at the American Museum of Natural History” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 9-13, 2013).
30. Zirakparvar, A.*, Sessa, J.*, **Ustunisik, G.***, Nadeau, T.*, Flores, K.*, and Ebel, D.S., “An Alternative Path to Improving University Earth Science Teaching and Developing the Geoscience Workforce: Postdoctoral Research Faculty Involvement in Clinical Teacher Preparation” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 9-13, 2013).
31. Vaughn, J.S.*, Philips, B.L., Hughes, J.M., Nekvasil, H., **Ustunisik, G.***, Lindsley, D. H., Coraor, A.E.*, McCubbin, F.M., and Woerner, W.R.*, “Determination of Anion Ordering in Mixed Apatites via Multinuclear Solid-State NMR and X-ray Crystallography” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 9-13, 2013).
32. **Ustunisik, G.***, Ebel, D., Walker, D. and Boesenberg, J., “Experimental Test of Predicted Condensed Assemblages in Dust-Enriched Systems” Presentation at 76th Annual Meeting of Meteoritical Society, Edmonton, Canada (July 29- August 2, 2013).

2012:

33. **Ustunisik, G.*** and Nielsen, R.L., “Consequences of Magma Eruption Dynamics: Intraflow Variations in Petrography and Mineral Chemistry within a Single Eruptive Unit from Whitewater Canyon, Oregon” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 3-7, 2012).
34. Flores, K.*, Nadeau, T.*, Zirakparvar, A.*, Greceovich, J.*, and **Ustunisik, G.***, “Unique Post-Doctoral Positions in Master of Arts in Teaching Earth Science Program at the American Museum

of Natural History: Involving Early-Career Research Scientists in Earth Science Education” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 3-7, 2012).

35. Nadeau, T.*, Flores, K.*, Zirakparvar, A.*, Greceovich, J.*, **Ustunisik, G.***, Kinzler R.J., McDonald, M., Mathez, A.E., and Mac Low, M., “Collaboration Between Research Scientists and Educators in Implementation of a Master Program for Training New Earth Science Teachers in New York State” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 3-7, 2012).
36. Hughes, J.M., Nekvasil, H., **Ustunisik, G.***, Lindsley, D. H., and Woerner, W.R.*, “Solid Solution in the Fluor-Chlor Apatite Anion Column” Presentation at Annual Meeting of the Geological Society of America (GSA), Charlotte, NC (November 4-7, 2012).

2011:

37. **Ustunisik, G.***, Nekvasil, H., and Lindsley, D. H., “Experimental Degassing of Volatile Bearing Martian Magmas into a CO₂-rich Atmosphere: Magmatic Vapor-Driven Surface Modification and Contribution to the Atmosphere” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 5-9, 2011).
38. Nekvasil, H. and **Ustunisik, G.***, “Mars as a System: The Role of Magmas in the Compositional Modification of the Martian Crust, Surface, and Atmosphere” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 5-9, 2011).

2010:

39. **Ustunisik, G.***, Nekvasil, H., and Lindsley, D. H., “Experimental Degassing of Cl, F, OH, and S Bearing Lunar Magmas” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 13-17, 2010).
40. Nekvasil, H., McCubbin, F.M., and **Ustunisik, G.***, “Using Apatite to Assess Volatile Contents of Primary Lunar Magmas: Potential Pitfalls” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 13-17, 2010).
41. **Ustunisik, G.*** and Nekvasil, H., “The Effect of Cl and S on Mineral Saturation in Interstitial Melts of the Chassigny Dunite: Experimental Results” Presentation at Meteoritics Conference, New York, NY (July 26-30, 2010).
42. Nekvasil, H., **Ustunisik, G.***, and McCubbin, F.M., “The Effect of Cl and S on Mineral Saturation in Interstitial Melts of the Chassigny Dunite: Petrogenetic Implications” Presentation at Meteoritics Conference, New York, NY (July 26-30, 2010).
43. Nekvasil, H., McCubbin, F.M., and **Ustunisik, G.***, “The Next Generation of Petrologic Study of Lunar Compositions: Exploring the Effects of Water, Cl, F, S and the Fluid Exsolution Processes that Have Affected Their Distribution” Presentation at Goldschmidt - Earth, Energy, and the Environment Conference, Knoxville, TN (June 13-18, 2010).
44. **Ustunisik, G.***, Nekvasil, H., and McCubbin, F.M.*, “The Influence of Magmatism and Magmatic Fluids on the Geochemical Evolution of the Martian Crust” Presentation at Goldschmidt - Earth, Energy, and the Environment Conference, Knoxville, TN (June 13-18, 2010).

2009:

45. Nekvasil, H., **Ustunisik, G.***, and McCubbin, F.M.*, “Constraints on the Nature of Hydrothermal Magmatic Fluids that Can Produce Sulfate-Rich Alteration Assemblages on Mars” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 14-18, 2009).
46. **Ustunisik, G.*** and Kilinc, A., “Role of Fractional Crystallization, Magma Recharge, and Magma Mixing in the Differentiation of the Small Hasandag Volcano, Central Anatolia, Turkey” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 14-18, 2009).
47. **Ustunisik, G.*** and Kilinc, A., “Crystal Size Distributions (CSDs) in a Basaltic Flow at the Small Hasandag Volcano, Central Turkey: Comparison of Calculated Residence Times of Plagioclase and

- Clinopyroxene Crystals” Presentation at Annual Meeting of the Geological Society of America (GSA), Portland, OR (October 18-24, 2009).
48. **Ustunisik, G.*** and Kilinc, A., “Oscillatory Zoning in Plagioclase: Effect of Pressure, Temperature, and Partial Molal Volumes of Na₂O and CaO in the Melt” Presentation at American Geophysical Union (AGU) Joint Assembly, Toronto, Canada (May 24-27, 2009).
- 2008:**
49. **Ustunisik, G.*** and Kilinc, A., “The Processes That Control Compositional Zoning in Plagioclase Phenocrysts” Presentation at American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 15-19, 2008).
50. **Ustunisik, G.***, “The Role of Isobaric Fractional Crystallization and Isobaric-Isenthalpic Magma Mixing in the Differentiation of Small Hasandag Volcano, Central Anatolia, Turkey” Presentation at Annual Meeting of the Geological Society of America (GSA), Houston, TX (October 4-9, 2008).
- 2007:**
51. **Ustunisik, G.*** and Kilinc, A., “A New Explanation for Oscillatory Zoning in Plagioclase Phenocrysts” Presentation at American Geophysical Union (AGU) Fall Meeting, Washington, DC (December 10-14, 2007).
- 2006:**
52. **Ustunisik, G.***, “The Role of Low-Pressure Fractionation in the Differentiation of Calc-Alkaline Ankara Volcanics” Presentation at Annual Meeting of the Geological Society of America (GSA), Philadelphia, PA (October 22-25, 2006).
- 2005:**
53. Uzun, S., Onal, M., **Ustunisik, G.***, and Sarikaya, Y., “The Effect of Hexylamine Adsorption on Some Physicochemical Properties of a Smectite Mineral” Presentation at 12th International Clay Symposium, Van Yuzuncu Yil University, Van, Turkey (September 5-9, 2005).
54. Onal, M., **Ustunisik, G.***, Noyan, H., Kahraman, S., Sarikaya, Y., and Bozdogan, I., “Nonclay Minerals Found in Clays” Presentation at 12th International Clay Symposium Van Yuzuncu Yil University, Van, Turkey (September 5-9, 2005).
- 2004:**
55. Dogan, A. U., Dogan, M., Kilinc, A., and **Ustunisik, G.***, “Evaluation of Alteration Indices and Validity of Geochemical Discriminant Diagrams as Applied to Altered Volcanics: An Example from Ankara Volcanics, Turkey” Presentation at 32nd International Geological Congress, Florence-Italy, (August 20-28, 2004).
56. Dogan, M., Dogan, A. U., Yesilyurt, F. I.*, **Ustunisik, G.***, and Akkus, M.*, “Macroscopic and Microscopic Features Databank for Sulfate Group Minerals-I” Presentation at 32nd International Geological Congress, Florence, Italy (August 20-28, 2004).
57. Dogan, M., Dogan, A. U., Yesilyurt, F. I.*, **Ustunisik, G.***, Tosun, S.*, Ersoy, E.*, Ozkan, B.*, Urundul, S.*, and Akkus, M.*, “Quantity and Quality of SCI Publications of Major European Universities: Examples from France, Germany, Italy, Scotland, and UK” Presentation at 1st International Congress on Higher Education – Perspectives on University Education in the 21st Century, Fatih University, Buyukcekmece, Istanbul, Turkey (May 27-29, 2004).
- 2003:**
58. Dogan, A. U., Dogan, M., Unsal, O.*, Ozbay, S.*, **Ustunisik, G.***, and Tigli, M.*, “Classifications, Physical and Chemical Characterizations of Hydrous Sulfate Group Minerals” Presentation at Mersin 10th Anniversary Symposium, Mersin, Turkey (October 12-15, 2003).
59. Dogan, A. U., Dogan, M., Ozerler, M., Kaltali, T.*, Yesilyurt, F. I.*, Unsal, O.*, Ozbay, S.*, Dogruel, Z.*, **Ustunisik, G.***, Conger, O.*, and Serbest, B.*, “Crystal Structures of Tremolite, Actinolite, and Ferro-actinolite types of Amphibole Group Asbestos Minerals” Presentation at 2nd International Symposium on Medical Geology, Nutrition, and Cancer, Istanbul, Turkey (March 31-April 3, 2003).

2002:

60. Dogan, A. U., Dogan, M., and **Ustunisik, G.***, “Data Bank for Petrology and Geochemistry: Volcanics of Vicinity of Ankara, Central Anatolia, Turkey” Presentation at 18th General Meeting of the International Mineralogical Association (IMA), Edinburg, Scotland (September 1-6, 2002).
61. Dogan, A. U., Dogan, M., Yesilyurt, F. I.*, **Ustunisik, G.**, and Kaltali, T., “Data Bank for Petrology and Geochemistry of Volcanics from Erciyes Mountain, Central Anatolia, Turkey” Presentation at 9th International Symposium on Experimental Mineralogy, Petrology, and Geochemistry (EMPG IX), Zurich, Switzerland (March 24-27, 2002).

2001:

62. Dogan, M., Dogan, A. U., Botha, A., Ozerler, M., Yesilyurt, I.*, Ozbay, S.*, Dogruel, Z.*, **Ustunisik, G.***, and Kaltali, T.*, “Comparison of Crystal Structures of Bentonites from Different Environments” Presentation at International Association of Sedimentologists (IAS) 21st Meeting, Davos, Switzerland (September 3-5, 2001).
63. Dogan, A. U., Dogan, M., Dogruel, Z.*, **Ustunisik, G.***, and Kaltali, T.*, “Crystal Structures of Carbonate Group Minerals” Presentation at 4th International Symposium on Eastern Mediterranean Geology, Isparta, Turkey (May 21-25, 2001).

2000:

64. Dogan, A. U., Dogan, M., Dogruel, Z.*, Yesilyurt, I.*, Isik, D.*, Bagirgan, A.*, Demirci, Y.*, Erdogan, M.*, Ozatmaca, E.*, Ozbek, S.*, and **Ustunisik, G.***, “Re-calculation of Structural Formula of Amphibole Standards” Presentation at 53rd Geological Congress of Turkey, Ankara, Turkey (April 2000).