

# Marina E. Gemma

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CONTACT INFORMATION	Department of Earth and Planetary Sciences American Museum of Natural History Central Park West at 79th Street, New York, NY, 10024	email: mgemma@amnh.org website: marinagemma.com phone: +1 212-769-5081
EDUCATION	<b>Columbia University</b> , New York, NY PhD, Earth and Environmental Sciences M.Phil. Earth and Environmental Sciences M.A. Earth and Environmental Sciences	<b>September 2016 – Present</b> Expected May 2022 May 2020 May 2018
	<b>Columbia University</b> , Columbia College, New York, NY B.A. Astrophysics with a Concentration in Earth Science	<b>September 2011 – May 2015</b>
PUBLICATIONS	Breitenfeld, L. B., Rogers, A. D., Glotch, T. D., Hamilton, V. E., Christensen, P. R., Lauretta, D. S., <b>Gemma, M. E.</b> , Howard, K. T., Ebel, D. S., Kim, G., Kling, A. M., Nekvasil, H., Lindsley, D. H., and DiFrancesco, N. J. (2021). <i>Machine Learning Mid-Infrared Spectral Models for Modal Mineralogy Predictions of CI/CM Chondritic Asteroids and Bennu</i> . (accepted; JGR Planets).	
	Ustunisik, G., Ebel, D. S., Walker, D., Nielsen, R. L., and <b>Gemma, M.</b> (2019). <i>Trace Element Partitioning Between CAI-Type Melts and Grossite, Melilite, Hibonite, and Olivine</i> . <i>Geochimica Et Cosmochimica Acta</i> , 267, 124146. doi: 10.1016/j.gca.2019.08.038	
	Mukadam, A., Pyrzas, S., Townsley, D., Gansicke, B., Hermes, J., Szkody, P., Kemp, J., Patterson, J., Ding, C., Wolf, K., <b>Gemma, M.</b> , Karamehmetoglu, E., Rock, J. (2016). <i>Constraining the Angular Momentum Evolution of V455 Andromedae</i> . <i>The Astrophysical Journal</i> , 821(1), 14. doi: 10.3847/0004-637X/821/1/14	
SELECTED CONFERENCE TALKS	<b>Effects of Temperature, Particle Size, and Petrologic Type on VNIR Spectra of Ordinary Chondrite Meteorites</b> <i>53rd Annual Meeting of the AAS Division for Planetary Sciences (virtual)</i>	(2021)
	<b>Trace Element Diversity of Chondrule Mesostasis in CV and CR Chondrites</b> <i>84th Annual Meeting of the Meteoritical Society</i>	(2021)
	<b>Planetary Data Visualization Using OpenSpace</b> <i>Lunar and Small Bodies Graduate Conference</i>	(2020)
	<b>Mapping Mineral Diversity in Ordinary Chondrite Meteorites</b> <i>Lunar and Small Bodies Graduate Conference</i>	(2019)
RESEARCH EXPERIENCE	<b>American Museum of Natural History</b> , New York, NY <i>Graduate Student Researcher, Department of Earth and Planetary Sciences</i> <i>Research Assistant, Department of Earth and Planetary Sciences</i>	<b>September 2016 - Present</b> <b>June 2015 – June 2016</b>
	<b>Stony Brook University</b> , New York, NY <i>Visiting PhD Student, Department of Geosciences</i>	<b>Summer 2016 - Present</b>
	<b>American Museum of Natural History</b> , New York, NY <i>Research Assistant, Department of Astrophysics</i>	<b>January 2014 – May 2015</b>
	<b>SETI Institute REU Program</b> , Mountain View, CA <i>Research Intern</i>	<b>June 2014 – August 2014</b>
	<b>Lamont-Doherty Earth Observatory</b> , Palisades, NY <i>Research Intern</i>	<b>May 2013 – August 2013</b>
	<b>MDM 2.4m Telescope</b> , Kitt Peak, AZ <i>Observing Assistant</i>	<b>January 2014, January 2015</b>
AWARDS & HONORS	<b>NASA Travel Award</b> , New York, NY	<b>August 2021</b>
	<b>LDEO Chevron Student Initiative Grant</b> , New York, NY	<b>May 2021</b>
	<b>Columbia Outstanding Teaching Assistant Award</b> , New York, NY	<b>May 2020</b>
	<b>AMNH Kade Fellowship</b> (Delayed due to COVID-19), Paris, France	<b>Summer 2020</b>
	<b>NASA ESF Student Poster Winner</b> , Mountain View, CA	<b>June 2018, 2020</b>
	<b>Intel Independent Research Grant</b> , San Clemente, CA	<b>July 2009 – June 2010</b>

RESEARCH ADVISING & MENTORING	<p><b>Physical Sciences REU Program</b> <span style="float: right;"><b>2018 – Present</b></span>            American Museum of Natural History  <i>Research Mentor</i></p> <ul style="list-style-type: none"> <li>• <b>Mentees:</b> Rheanna Fleming (2021; <b>Primary Mentor</b>); Darby McDaniel (2020; <b>Co–Mentor</b>); Julia Gonzales (2019); <b>Primary Mentor</b>; Alexander Kling (2018; <b>Co–Mentor</b>)</li> </ul> <p><b>Women in Science at Columbia Undergraduate Mentoring Program</b> <span style="float: right;"><b>2020 – Present</b></span>  <i>Graduate School/Career Mentor</i>, Columbia University</p> <p><b>REU Mentoring Program</b> <span style="float: right;"><b>2020</b></span>  <i>Graduate School/Career Mentor</i>, Lamont-Doherty Earth Observatory</p>
TEACHING EXPERIENCE	<p><b>AMNH Department of Education</b>, New York, NY <span style="float: right;"><b>2018–2020</b></span>  <i>Astrophysics Research Educator</i></p> <ul style="list-style-type: none"> <li>• Instructor for the <i>Secrets of the Solar System</i> course for high schoolers.</li> </ul> <p><b>Columbia Department of Earth and Environmental Sciences</b>, New York, NY <span style="float: right;"><b>Present</b></span>  <i>Teaching Assistant</i></p> <ul style="list-style-type: none"> <li>• Instructor for undergraduate courses UN1411 <i>Earth: Origin, Evolution, Processes, Future</i> and UN2100 <i>Climate System</i>, and graduate course GU4113 <i>Introduction to Mineralogy</i>.</li> </ul> <p><b>Columbia Department of Astronomy</b>, New York, NY <span style="float: right;"><b>January 2014 – May 2015</b></span>  <i>Grading Assistant</i></p> <ul style="list-style-type: none"> <li>• Grader for the courses ASTR C1453 <i>Another Earth</i>, and ASTR C1610 <i>Theories of the Universe</i>.</li> </ul>
PROFESSIONAL EXPERIENCE	<p><b>Lunar Graduate Conference (LunGradCon)</b>, Mountain View, CA <span style="float: right;"><b>2019 – Present</b></span>  <i>Conference Organizer</i></p> <p><b>UCLA Ion Microprobe Student Workshop</b>, Los Angeles, CA <span style="float: right;"><b>February 2020</b></span>  <i>Participant</i></p> <p><b>#HacktheSolarSystem @ AMNH</b>, New York, NY <span style="float: right;"><b>February 2019</b></span>  <i>Project Stakeholder/Scientific Advisor</i></p> <p><b>International Summer School for Astrobiology</b>, Santander, Spain <span style="float: right;"><b>June 2017</b></span>  <i>NASA Summer School Scholar</i></p>
COMMUNITY INVOLVEMENT	<p><b>OpenSpace Project</b>, <i>Science Ambassador</i>, New York, NY <span style="float: right;"><b>2017 – Present</b></span></p> <p><b>Girls Who Code @ Columbia</b>, <i>President</i>, New York, NY <span style="float: right;"><b>2018 – Present</b></span></p> <p><b>Meet the Scientist @ the Intrepid Museum</b>, New York, NY <span style="float: right;"><b>2017 – Present</b></span></p> <p><b>LDEO Open House</b>, <i>Volunteer Scientist</i>, Palisades, NY <span style="float: right;"><b>2017 – Present</b></span></p> <p><b>Girls Science Day @ Columbia</b>, <i>Group Leader</i>, New York, NY <span style="float: right;"><b>2016 – Present</b></span></p> <p><b>AMNH Identification Day</b>, <i>Meteorite Identifier</i>, New York, NY <span style="float: right;"><b>May 2017</b></span></p> <p><b>Columbia Department of Astronomy</b>, <i>Outreach Volunteer</i>, New York, NY <span style="float: right;"><b>2013 – 2015</b></span></p>
SELECTED MEDIA & OUTREACH	<p><b>Astronomy Online Public Programs</b>, New York, NY <span style="float: right;"><b>March 2020 - Present</b></span>  <i>American Museum of Natural History</i></p> <ul style="list-style-type: none"> <li>• <b>Presenter:</b> 6 programs</li> <li>• <b>Chat Scientist:</b> 9 programs</li> </ul> <p><b>Cosmic Conversations Series</b>, San Francisco, CA <span style="float: right;"><b>December 2020</b></span>  <i>Morrison Planetarium, California Academy of Sciences</i></p> <p><b>Girls Science &amp; Engineering Day</b>, New York, NY <span style="float: right;"><b>March 2021</b></span>  <i>Intrepid Sea, Air, and Space Museum</i></p>
TECHNICAL SKILLS	<p>Electron Microprobe (<b>EMP</b>); Scanning Electron Microscope (<b>SEM</b>); X-Ray Computed Tomography scanner (<b>CT</b>); X-Ray Diffractometer (<b>XRD</b>); Laser Ablation Inductively Coupled Plasma Mass Spectrometry (<b>LA-ICP-MS</b>); Visible Near-Infrared (<b>VNIR</b>) Spectrometry; Sample preparation of extraterrestrial materials</p>
SOFTWARE	<p>Python, C, MATLAB, Adobe Illustrator, L<sup>A</sup>T<sub>E</sub>X</p>