PROTEEK CHOWDHURY
Department of Earth, Environmental and Planetary Sciences
Rice University
6100 Main Street, MS-126
Houston, TX 77005-1892 Email: proteek.chowdhury@rice.edu
USA. Phone #: +1(832)-705-2385
Website: https://proteekchowdhury.wixsite.com/chowdhury

Education:

PhD, Department of Earth, Environmental and Planetary Sciences,
Rice University, Houston, Texas, USA 2015-present

M.Sc., Geology and Geophysics, Indian Institute of Technology (I.I.T),
Kharagpur, India 2015

B.Sc., Geology, Presidency College, University of Calcutta, Kolkata, India 2013

M.Sc. Thesis: Petrography, mineral chemistry and thermobarometric estimations of Tso-Morari eclogites, NW Himalayas.

Professional Experience:

Research/ Teaching Assistant, Rice University 2015-present

Summer Intern, Indian Institute of Science, India Jun 2014- Aug 2014
(with Dr. Ramanada Chakrabarti)

Research Interests:

Volatile cycling in deep Earth and other planetary bodies, subduction zone processes with special emphasis on redox conditions, trace element partitioning, role of melting and magma in the evolution of planets, planetary differentiation.

Honors and Awards:

GSA Graduate Student Award, Geological Society of America 2020

Torkild Rieber Award, Department of EEPS, Rice University 2020

Departmental Teaching Award, Rice University 2019

Outstanding Poster Award, Industry-Rice Earth Science Symposia, Rice University 2019

Keck Fellowship, Rice University Jan 2018- May 2018

Weiss Fellowship, Rice University Jan 2016- Mar 2016

Foreign Travel Endowment, University of Calcutta 2015

CSIR-UGC JUNIOR RESEARCH FELLOWSHIP: Council of Scientific & Industrial Research and University Grants Commission, Govt. of India 2014

Master of Science Fellowship, I.I.T, Kharagpur, India Jul 2013- Apr 2015

University Medal: 3rd rank holder in B.Sc., University of Calcutta 2013

Publications:

Chowdhury, P. & Dasgupta, R. (2019). *Effect of sulfate on the basaltic liquidus and sulfur concentration at anhydrite saturation (SCAS) of hydrous basalts – Implications for sulfur cycle in subduction zones*. Chemical Geology 522:162-174. doi:10.1016/j.chemgeo.2019.05.020

Chowdhury, P. & Dasgupta, R. (2020). *Sulfur extraction via carbonated melts from sulfide-bearing mantle lithologies - Implications for deep sulfur cycle and mantle redox.* Geochimica et Cosmochimica Acta 269:376-39. doi: 10.1016/j.gca.2019.11.002

Dasgupta, R., **Chowdhury, P.**, Eguchi, J., Sun, C. & Saha, S. (accepted). *Volatile-bearing partial melts in the lithospheric and sub-lithospheric mantle on Earth and other rocky planets*. Reviews in Mineralogy and Geochemistry.

Chowdhury, P., Dasgupta, R., Phelps, P., Costin, G. & Lee, C-T. A. (in prep) *Partitioning of trace elements between anhydrite and sediment melts: Implications for subducting sediment redox and Ce/Mo at arcs.*

Conference Abstracts:

Dasgupta, R., **Chowdhury, P.**, Eguchi, J., Sun, C. & Saha, S. (2020). *Extraction of Life-Essential Volatiles via Melting of Rocky Planetary Mantles of Variable Redox. Goldschmidt.*

Lerner, A., Muth, M., Wallace, P., Lanzirotti, A., Newville, M., Gaetani, G., **Chowdhury, P.** & Dasgupta, R. (2020*) Correcting Fe- and S-XANES Beam Damage and Recognizing Rapid Redox Equilibration of Olivine-Hosted Melt Inclusions. Goldschmidt.*

Chowdhury, P., Dasgupta, R., Phelps, P., Costin, G. & Lee, C-T. A. (2019). December. *Partitioning of trace elements between anhydrite and sediment melts: Implications for subducting sediment redox and Ce/Mo at arcs. In AGU Fall Meeting Abstracts.*

Chowdhury, P. and Dasgupta, R. (2018). December. *Sulfur extraction via carbonated melts from sulfide-bearing mantle lithologies-Implications for deep sulfur cycle. In AGU Fall Meeting Abstracts.*

Chowdhury, P. and Dasgupta, R. (2017). December. *Effect of sulfate on the liquidus and sulfur concentration at anhydrite saturation (SCAS) of hydrous basalt at subduction zones. In AGU Fall Meeting Abstracts.*

Teaching Experience:

Teaching Assistant of ESCI 419/619: Earth's Chemistry and Materials — Spring 2020

Supervisor of Ryan Anselm, high-school intern,
Experimental Petrology Lab, Rice University — Summer 2019

Teaching Assistant of ESCI 322: Earth's Chemistry and Materials — Fall 2018

Lab Instructor of Geochemistry & Cosmochemistry — Fall 2014

Skills:

Technical: Multi-Anvil, Piston Cylinder, Gas-Mixing Furnace, Clean-Lab

Analytical: Raman, Electron Microprobe, ICP-MS/LA-ICP-MS, SEM, TEM

Modelling and Editing: MATLAB, MELTS, Excel, Adobe Illustrator, Adobe Photoshop

Services:

Journal Reviewer: Earth and Planetary Science Letters (EPSL)

Field Works:

Field work in Lesser Himalayas, sampling	2010
Field work in Aravalli Range, Rajasthan, sampling and mapping (**field leader**).	2011
Field work in Phosphate and Pb-Zn mine, Udaipur, Rajasthan	2012
Field work in Angul, Eastern Ghats, Odisha, mapping (**field leader**).	2013
Field work in Ghatshila, Jharkhand, sedimentary mapping	2014
Field work in Cascades, Oregon, California and Washington	2015
Field work in Grand Canyon and Mt. Pass, California	2016