## **Adam Charles Simon**

Department of Earth and Environmental Sciences University of Michigan 1100 North University Avenue, NUB 2534 Ann Arbor, MI 48109-1005

## **EDUCATION**

2003 – 2005	Postdoctoral Fellow, The Johns Hopkins University
2000 – 2003	PhD, University of Maryland
1995 – 1997	M.Sc., Stony Brook University
1992 – 1995	B.Sc., University of Maryland

## **PROFESSIONAL POSITIONS**

2019 –	Arthur F. Thurnau Professor of Earth & Environmental Sciences
2018 –	Professor, Program in the Environment (PitE)
2021 – 2024	Director, Michigan Research and Discovery Scholars (MRADS)
2012 – 2018	Associate Professor, University of Michigan,
2011 – 2012	Associate Professor, University of Nevada, Las Vegas, Geosciences
2005 – 2011	Assistant Professor, University of Nevada, Las Vegas Geosciences
2004 – 2005	Postdoctoral Fellow, The Johns Hopkins University
2003 – 2004	Research Associate, University of Maryland
1997 – 2000	Laboratory Manager, Environmental & Toxicology International, Inc.

## **HONORS/AWARDS**

2025	American Geophysical Union Reginald Daly Lecture
2025	Elected as a Fellow of the Mineralogical Society of America (MSA)
2024	Society of Economic Geologists (SEG) Distinguished (Global) Lecturer
2019	Arthur F. Thurnau Professor, University of Michigan
2018	Michigan Sustainability Case Studies Innovation Prize
2017	University of Michigan Provost's Teaching Innovation Prize
2017	Best Professor, selected by department undergraduate
2016	Best Professor, selected by department undergraduate
2015	Elected as a Fellow of the Society of Economic Geology
2012	Graduate & Professional Student Assoc., Outstanding Contribution Award
2010	Distinguished Teacher Award for College of Sciences, UNLV
2009	Graduate & Professional Student Association Faculty Service Award
2006	Congressional Antarctica Service Medal

EDITORIAL SERVICE		
2024 –	Associate Editor, American Mineralogist	
2023 – 2024	Chief Editor of Applied Earth Science	
2020 –	Associate Editor, Geochimica et Cosmochimica Acta	
2017 –	Associate Editor, Frontiers in Earth Science	
2016 –	Associate Editor, Journal of Economic Geology	

## PROFESSIONAL SERVICE

2025	New Mexico Tech Earth and Environmental Science Dept. tenure and promotion
2025	Co-organizer/co-leader, 14-day Indonesia field trip, Society of Economic Geologists

2025	Lead judge for International Geomapping Competition, Indonesia
2025	Theme 5 Earth Resources Co-Chair, Goldschmidt Conference
2024	Promotion/tenure committee, University of Potsdam
2024	Delegate, International Union of Geological Sciences
2024	Society of Economic Geologists Annual Meeting Co-Organizer
2024	Editor, Special "Lithium" Volume, Society of Economic Geologists
2024	French National Research Agency (ANR) review panel
2024	Natural Sciences and Engineering Research Council of Canada
2024	Theme Co-Chair, Goldschmidt International Conference: Earth Resources
2024	Theme Co-Chair, International Geological Congress
2024	National Science Foundation Panel
2024	Promotion and Tenure committee, University of Ottawa
2024	Promotion and Tenure committee, University of British Columbia
2023	Australia - Republic of Korea - United States Trilateral Dialogue
2023	National Science Foundation Panel
2023	Deutsche Forschungsgemeinschaft (DFG) German Research Foundation
2021 –	National Academy of Sciences National Committee for Geosciences
2021 –	-
	Mineralogical Society of American Nominating Committee Chair
2020	Mineralogical Society of American Award Committee, Chair
2019	Society of Economic Geologists Fellows Committee, Chair
2020	Tenure and Promotion review for Al al-Bayt University, Jordan
2019	National Science Foundation Graduate Research Fellowships Panel
2019 – 2022	Society of Economic Geologists, Chair of Committee on Committees
2019 – 2022	Councilor, Mineralogical Society of America (MSA) global governing body
2018	U. Michigan Ross Business School, Renewable Energy Case Competition
2018	National Science Foundation Graduate Research Fellowships Panel
2017	U. Michigan Ross Business School, Renewable Energy Case Competition
2017	Society of Economic Geologists Awards Committee
2017	Estonian Research Council, Grant Proposal Reviews
2017	National Science Foundation postdoctoral fellowship review panel
2017	National Sciences and Engineering Council of Canada (NSERC) panel
2016	Tenure & Promotion Panel University of Leuven (KU Leuven), Belgium
2016	Spring Panel, National Science Foundation, Petrology and Geochemistry
2016	Reviewer, England's National Environmental Research Council (NERC)
2016	Reviewer, National Science and Engineering Research Council of Canada
2016	Fall Panel, National Science Foundation
2016 - 2018	Councilor, Society of Economic Geologists
2016	Reviewer, Fellowship Program, Wissenschaftskolleg zu Berlin
2016	Co-chair, Theme 11: Mineral Resources, 2016 Goldschmidt Conference
2014 –	Faculty sponsor, Student Chapter of the Society of Economic Geologists
2014 –	Faculty sponsor, Student Chapter American Assoc. Petroleum Geologists
2014	Organized and convened technical session for AGU Fall Meeting
2014	Co-chair, Theme 11: Mineral Resources, 2014 Goldschmidt Conference
2013	National Science Foundation Graduate Fellowship Review Panel
2012	Organized and convened one technical session for AGU Fall Meeting
2012	Gordon Conference Geochemistry of Mineral Deposits
2012	National Science Foundation Graduate Fellowship Review Panel
2010	Reviewer for NSF Engineering Research Centers
2010	Deviewer for Mol Eußingening Desegration Centers

2010	Lead convener, Pan-American Current Research on Fluid Inclusions
2010	National Science Foundation Graduate Fellowship Review Panel
2010	Geological Society of American Session Convener
2009	Reviewer for NSF Engineering Research Centers
2009	Geological Society of American Session Convener
2008	AGU Fall Meeting Session Convener
2008	GSA Cordilleran Section Meeting Session Convener
2007	AGU Fall Meeting Session Convener
2006	Chemical Geology, Guest Editor for Special Issue, Subduction Zones
2006	AGU Spring Meeting Session Convener
2005	AGU Fall Meeting Session Convener
2005	Goldschmidt Session Convener
2002	GSA Annual Meeting Session Convener
2001	AGU Spring Meeting Session Convener

## **UNIVERSITY SERVICE**

2024 –	Provost Office Thurnau Advisory Council
2024 – 2025	Provost Office Thurnau Selection Committee
2023 - 2024	University of Michigan Diversity, Equity and Inclusion (DEI) Committee
2022 – 2023	College of LSA Carbon Neutrality Committee
2021 – 2023	University of Michigan Rackham Graduate School Predoctoral Committee
2021 – 2022	Committee for Rhodes, Marshall, Goldwater, and Astronaut Scholarships
2021 – 2022	LSA College level committee to offset scope three carbon emissions
2019 – 2023	International Travel Oversight Committee (Provost's Office)
2018 – 2020	Executive Committee, Program in the Environment (PitE) major
2018 – 2019	Teaching Academy mentor, College of Literature, Science, and the Arts
2018 – 2021	Curriculum Committee, College of Literature, Science, and the Arts
2017 – 2018	University of Michigan Energy Institute, Director search committee
2017 – 2018	Co-chair, Committee to transition of the undergraduate Program in
	the Environment (PitE) program to shared governance between School for
	Environment and Sustainability and College of LSA
2017 – 2018	UM President's Greenhouse Gas Reduction Committee
2016 – 2017	Curricular Innovations Working Group, developing graduate curriculum
	recommendations for School of Environment and Sustainability (SEAS)
2016 – 2017	Michigan Sustainability Case Studies (MSC) curriculum review committee
2016 – 2017	Committee responsible for 5-year review of the University of Michigan
	Energy Institute
2016	Member, Program in The Environment (PiTE) committee to revise Natural
	Sciences major
2016	T & P Committee for Department of Communications candidate Sol Hart
2014 – 2015	Chair, Program in The Environment (PiTE) Committee to develop 'Energy
	science and policy"
2011 – 2012	Chair, UNLV Graduate College Student Funding Committee
2011 – 2012	Member, UNLV Graduate College Executive Advisory Committee
2011 – 2012	University Best Graduate Thesis/Dissertation Committee
2010 – 2012	Faculty Senate Academic Standards Committee
2007 – 2009	Chair, UNLV Faculty Senate Academic Standards Committee
2008 – 2012	Faculty Advisor to UNLV Graduate Professional Student Association

2008 – 2012 2008 – 2009	University Faculty Senate Academic Integrity Appeal Panel Member UNLV High Pressure Science and Engineering Center Director Search
2006 – 2008	University Faculty Senate Sabbatical Leave Committee
2006 – 2007	High Pressure Science and Engineering Center faculty search
DEPARTMEN <sup>®</sup>	T SERVICE
2013 –	Alumni Board faculty liaison, alumni relations committee
2023	Promotion & Tenure Committee for Dr. Sierra Petersen
2021 – 2023	Executive Committee (elected by faculty)
2020	14-day field trip Israel & Jordan with 15 undergraduate/graduate students
2018 – 2021	Curriculum Committee
2016 – 2023	Organized and hosted career panels for students
2016	7-day field trip with 18 undergraduate/graduate students to Ontario and
	Michigan's Upper Peninsula
2016	Monthly department electronic newsletter
2016	Annual department print Newsletter
2016	Alumni Relations Committee
2015	7-day field trip for 12 undergraduate/graduate students to Ontario
2014 – 2015	Alumni Relations Committee
2014 – 2015	Executive Committee
2014	2-week field trip with 21 students to Chile
2014	7-day field trip for 29 undergraduate/graduate students to MI Upper Peninsula
2014	Member, Committee for the Promotion Review of Fuxiang Zhang
2014	Turner Postdoctoral Applicants Committee
2013 – 2014	Executive Committee (elected by faculty)
2013	Graduate Admissions Committee
2012	Committee for Promotion Review of Research Scientist Gordon Moore
2011 – 2012	Geoscience Graduate Coordinator (n = 60 students; no compensation)
2006 – 2012	Supervisor of the Electron Microanalysis and Imaging Laboratory (EMIL)
2010 – 2010	Chair, Search Committee, Director of Electron Microprobe Laboratory
2009 – 2010	Faculty Mentor, Introductory Geology Course Graduate Lecturers
2006 – 2010	Geoscience Promotion and Tenure Committee
2008 – 2009	Chair, Search Committee for Director of Electron Microprobe Laboratory
2006 – 2008	Faculty Supervisor, Geoscience Student GeoSymposium
2006 – 2007	Geoscience Scholarship Committee
2006 – 2007	Chair, Undergraduate Enrollment Working Group
2006	Geoscience Colloquium Coordinator

## **INTERVIEWS, PODCASTS**

2005 - 2006

2006

2006

2025 EFN TV: Oil price pressure, copper price rise and record milk prices

Chair, Geoscience Undergraduate Awards Committee

2024 Den nya eckonomin: <u>The New Economy</u>

AGU Eos: <u>Here's Why Resolution Copper Wants to Mine Oak Flat</u>
Michigan Mind: <u>Finding the metals necessary for the energy transition</u>

Geoscience Increasing Undergraduate Numbers Working Group

Resource Insider: <u>The Copper Timebomb</u>

Geology Bites: Battery Metals

Committee, Best Graduate Thesis

Michigan NPR Stateside: <u>Copper Supply</u>
The Resource Insider: <u>The Copper Time Bomb</u>
Planet Geo: We Just Don't Have Enough

NPR Interlochen Public Radio: Copper Country's Conundrum

Seattle Times: Can the rush for clean energy overcome a legacy of pollution?

## **INVITED PRESENTATIONS**

2025 American Geophysical Union (AGU) Reginald Daly Lecture

American Geophysical Union (AGU) Reginald Daly Lecture (separate)

Carnegie Institute for Science Earth and Planets Laboratory

China University of Geosciences Beijing

International Conference on Geological Engineering and Geosciences (Keynote)

Arizona Chapter of Women in Mining (virtual webinar)

EAGE Conference on the Future of Mineral Exploration (Keynote)

Pacific Northwest National Laboratory Alaska Sustainable Energy Conference Pontificia Universidad Católica de Chile

Universidad de Chile

Goldschmidt Conference (Keynote)

Geological Association of Canada GAC-MAC Annual Meeting (Keynote)

Society of Economic Geologists Earth Day Symposium (virtual) Society for Geology Applied to Mineral Deposits (SGA), Peru (virtual)

American Chemical Society (ACS) Annual Meeting

Minnesota Committee on Foreign Relations

United States Department of State, Washington, DC

**OPEC Energy Studies Department (virtual)** 

Commodities Research Unit (CRU) World Copper Summit, Chile

Current Trends in Mining Finance (CTMF) 2025

University of Texas El Paso

International Energy Forum, IEF, Kingdom of Saudi Arabia

Future Minerals Forum, Kingdom of Saudi Arabia

2024 Universidad Central del Ecuador, Capítulo/Asociación Estudiantil (virtual webinar)

Society of Economic Geologists Distinguished Lecture (virtual webinar)

Universidad Nacional Mayor de San Marcos

Colorado School of Mines Geology and Geological Engineering

Denver Regional Exploration Geologists' Society

China University of Geosciences, Beijing Chinese Academy of Sciences, Beijing

Nanjing University School of Earth Sciences and Engineering University of Science and Technology of China (USTC), Hefei

China University of Geosciences, Wuhan, School of Earth Resources

Guangzhou Institute of Geochemistry and Chinese Academy of Sciences

Institute of Geochemistry, Chinese Academy of Sciences, Guiyang

Chang'An University, Xi'an,

International Geological Congress IGC 2024 (plenary speaker)

Pukyong National University (PKNU) Republic of Korea

Future Innovation Needs for Responsible Mining of Critical Minerals

Colorado School of Mines

Geological Society of America (Pardee session keynote)

Universitas Gadjah Mada, Indonesia

University of Nevada

Northern Michigan University

SIMEXMIN Brazilian Symposium on Mineral Exploration (plenary speaker)

IEA-IEF-OPEC 14th Annual Symposium on Energy, Saudi Arabia

Ross School of Business ClimateCAP

University of South Carolina

Society of Economic Geologists Distinguished Lecture (Namibia)

Financial Times US Decarbonization and Industrial Transition Summit

Diag Days Lecture, University of Michigan Alumni Association

Society of Economic Geologists Lithium Demand/Supply webinar

Virginia Tech Geosciences (virtual webinar)

2023 American Geophysical Union AGU Annual Meeting

XVI Chilean Geological Congress, XVICGCh (plenary speaker)

Universidad de Atacama

Alfred Gordji Distinguished Lecturer, Osher Lifelong Learning Institute

Central Michigan University

Defense TechConnect Innovation Summit & Expo (DC)

CREO, Clean, Renewable and Economic Opportunities (Montreal)

Environmental Law & Policy Center (EPLC)

Geological Society of America

Citizens Climate Lobby (Midwest Regional Conference)

Johns Hopkins University

Payne Institute for Public Policy Critical Minerals Symposium

Society for Geology Applied to Mineral Deposits (SGA) (Keynote)

Society of Economic Geologists Annual Meeting

Ivanhoe Mines, DRC

University of Lubumbashi, DRC

University of Kolwezi, DRC

Society for Geology Applied to Mineral Deposits Inaugural Field Workshop

HxGN Live Global 2023 meeting (keynote speaker and facilitator)

University of Michigan Saturday Morning Physics

National Tribal Roundtable (keynote)

Center for Strategic and International Studies (CSIS) (keynote)

Stanford University Mineral-X Symposium on Critical Minerals

Resilient Supply of Critical Minerals Workshop (keynote)

Citizens Climate Lobby (National)

Seoul National University

Pukyong National University (PKNU) Republic of Korea

Asia Foundation, Seoul, Republic of Korea

Cornell University (2 talks)

University of Texas Austin (2 talks)

University of Tehran

University of South Carolina

North Carolina State University

2022 TEDX University of Michigan

University of Arizona

GeoHUG Geologists, Geology Webinar

American Geophysical Union Annual Meeting

Goethe University, Frankfurt

Stony Brook University

University of Lagos

University of Liberia

University of Geneva

Natural History Museum, London

Geological Society of America Annual Meeting

University of Western Australia

Society of Economic Geologists Annual Meeting

Monash University, Australia

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

University College Dublin

North Carolina State University

Colorado School of Mines

Bureau of Economic Geology, Austin, Texas

New Mexico Institute of Mining and Technology

University of Texas El Paso

2021 Irish Centre for Research in Applied Geoscience (iCRAG)

University College Dublin

Workshop on Critical Metals (keynote) Institut de Physique du Globe de Paris

University of Alaska

Society of Economic Geologists Annual Meeting (keynote)

2020 University of Ottawa

Department of Energy (Washington, DC)

University of Maryland Ore Deposits Hub

2019 Chinese Academy of Sciences

China University of Geosciences Beijing

Society of Economic Geologists Annual Meeting

Northern Illinois University

Geologists of Jackson Hole, Wyoming

2018 Society of Economic Geologists Annual Meeting

Goldschmidt Conference

Gordon Conference, Geochemistry of Mineral Deposits Pan-American Current Research on Fluid Inclusions

University of British Columbia

Michigan Law School, Journal of Law Reform Annual Symposium

University of Iowa

2017 Cornell University

Advancing Health Communities, Environmental Engineering and Science

Society for Geology Applied to Mineral Deposits (SGA, keynote)

Society of Economic Geologists, Annual Meeting (Beijing) (keynote)

Prospectors and Developers Association of Canada (PDAC)

Akita University, Japan

International Cooperation Agency Research Institute, Tokyo, Japan

	California State University Fullerton
	Brigham Young University
	Miami University of Ohio
2016	Geological Society of America Annual Meeting (keynote)
	Stanford University (two talks)
	Gordon Conference, Geochemistry of Mineral Deposits (keynote)
	University of Chile
2015	American Geophysical Union Fall Meeting
	University of Hannover, Germany
	Goldschmidt Geochemistry Conference, Prague, Czech Republic
	Ralph J. Roberts Center for Research in Economic Geology
2014	Geological Society of America Annual Meeting
	Society of Economic Geologists Annual Meeting
	Goldschmidt Geochemistry Conference
	Western Michigan University
	Wayne State University
2013	University of North Dakota
	North Dakota State University
	AGU Fall Meeting, San Francisco
	Goldschmidt Geochemistry Conference
2012	University of Illinois Urbana-Champaign
	Geological Society of Nevada, Reno
	American Museum of Natural History
	University of Michigan, Department of Earth & Environmental Sciences
2011	Mineralogical Society of America, Sulfur Short Course, Goslar, Germany
2010	Hebrew University of Jerusalem
	McGill University
2009	University of Southern California
	Geological Society of Nevada, Las Vegas Chapter
2008	University of Nevada, Reno
	Geological Society of Nevada, Elko Chapter
2007	Tohoku University, Sendai, Japan
	Bern University, Switzerland
2006	Barrick Gold Corporation
	Northern Arizona University
	Institute of Seismology and Volcanology, Petropavlovsk, Russia
	Geological Society of Nevada, Las Vegas Chapter
	University of Nevada Reno
	Colorado School of Mines
2005	Johns Hopkins University
	University of Nevada Las Vegas, UNLV

COMMUNITY OUTREACH		
2024	U.S. State Department, Democratic Republic of Congo	
2023	University of Lubumbashi, Democratic Republic of Congo	
2019 – 2020	Science Olympiad, Slauson Middle School, Ann Arbor Public Schools	
2018 – 2019	Mentor for 6 <sup>th</sup> -8 <sup>th</sup> grade Academic Games team, Ann Arbor, MI	

2016 –	Co-organized, secured funding, and taught Coastal Oceanography
	Environment Science School (COESSING) annual summer school in
	Accra, Ghana for 150 students from Cameroon, Ghana, Ivory Coast,
	Nigeria, and Liberia
2017	Science Olympiad Coach, Map Reading, 4 <sup>th</sup> and 5 <sup>th</sup> grade
2016	Master event coordinator, 5 <sup>th</sup> grade Battle of the Books,
2015	Master event coordinator, Battle of the Books, 4 <sup>th</sup> grade
2015	Guest lecturer, Pioneer High School AP Environmental Science
2015	Team Leader, Battle of the Books, 3 <sup>rd</sup> grade Lawton Elementary School
2014	Team Leader, Battle of the Books, 4 <sup>th</sup> and 5 <sup>th</sup> grades
2013	Rock cycle demonstration, 2 <sup>nd</sup> grade, Lawton Elementary School
2013	5 <sup>th</sup> grade Science Olympiad Coach, Lawton Elementary School
2013	Earth Science mentor, 6 <sup>th</sup> grade FLL robotics teams
2010 – 2011	Geoscience Content Specialist, 2011 UNLV – Clark County School District
	Summer School VISIONS Program for K-5 Teachers
2009 – 2012	Cub Master for Boy Scout Troop 713
2006 – 2009	Nevada Southern Regional K-12 Science Fair Judge

#### **ACTIVE GRANTS**

2024-2026, \$342,692 (Simon PI) NSF EAR. GOALI: Development of a breakthrough exploration method to explore for Cu-Ni-sulfide mineral deposits in the United States.

2023-2026, \$444,296 (Simon PI) NSF EAR 2233425, Collaborative Research: Testing endmember hypotheses for the source of mineralizing fluid(s) in iron oxide - copper - gold (IOCG) deposits.

#### **EXPIRED GRANTS**

2022-2025, \$357,603, NSF EAR 2214119, Reconstructing the magmatic and hydrothermal evolution of the Au-rich, Cu-poor Dorado porphyry deposit, Chile: Implications for Cu/Au ratios in porphyry deposits worldwide.

2023-2026, \$444,296, (Simon PI) NSF EAR 2233425: Testing endmember hypotheses for the source of mineralizing fluid(s) in iron oxide - copper - gold (IOCG) deposits, Co-I, 08/2023-07/2026

2022-2024, \$357,603, NSF EAR 2214119: Reconstructing the Magmatic and Hydrothermal Evolution of the Au-rich, Cu-Poor Dorado Porphyry Deposit, Chile: Implications for Cu/Au Ratios in Porphyry Deposits Worldwide

2019-2022, \$369,279, NSF EAR 2233425, Testing the hypothesis that iron oxide - copper -gold (IOCG) and iron oxide - apatite (IOA) deposits evolve as parts of the same mineral system.

2015-2020, \$350,000, NSF EAR 1524394, Sulfur Isotope Fractionation and Sulfur Partitioning between Apatite and Silicate Melts

2013-2017, \$388,582, NSE EAR 1250239, Collaborative Research: The Behavior of Sulfur During Magma Mixing and Implications for Magma Degassing and Ore Formation

2016-2017, \$33,000, University of Michigan Provost's Third Century Initiative to develop inquiry-based sustainability case studies.

2016, \$20,000, NSF EAR, Geochemistry of Mineral Deposits Gordon Research Conference (GRC). Funded students and early career scientists to attend the GRC.

2012-2016, \$379,393, NSF EAR 1264560, Quantifying Rare Earth (REE) and High Field Strength (HFSE) Element Mobility in Fluids at Conditions Appropriate for Forearc to Subarc Cold and Hot Subduction Zones.

2010-2014, \$148,000, NSF EAR 1019714, Collaborative Research: Integrated investigations of isotopic fractionation in magmatic systems.

2010-2011, \$21,350, NSF EAR 1019587, Pan-American Current Research on Fluid Inclusions (PACROFI) Conference.

2007-2013, \$164,763, NSF EAR 0609550, An Experimental Study to Elucidate PGE, Base Metal Sulfide and Au Fractionation in Mafic Layered Intrusions.

2010-2011, \$20,000, U.S. Department of the Interior (USGS) History and origin of mineral deposits in Northern Nye County, Nevada.

2009-2010, \$75,000, U.S. Geological Survey (USGS), History and origin of mineral deposits in Northern Nye County, Nevada.

2006-2012, \$570,733DO, E NNSA, Quantifying trace element mobility at elevated pressure and temperature with applications to subduction zone recycling.

2007-2008, \$15,000, NSF EPSCoR, Characterization of unsaturated flow in leach piles.

#### **INDUSTRY SUPPORT (DIRECT)**

2011-2013, Characterizing ore mineralization at the Estelle property, Alaska. Millrock Resources and Teck Resources. Funded one M.S. student research project. \$20,000

2009-2010, Defining stratigraphy and determining the influence of metamorphism as an ore control in the lower Paleozoic host rocks of the Getchell Carlin-type gold deposit, Nevada, U.S.A. Barrick Gold Corporation, Co-PI Jean Cline. Funded one MSc. student research project. \$30,000.

2007-2008, Igneous Geochronology and Petrography of the Cortez Hills Carlin-type Gold Deposit, Cortez, Nevada. Center for Research in Economic Geology (CREG), University of Nevada, Reno, U.S.A. Funded one M.S. student research project. \$16,000.

#### INDUSTRY SUPPORT (INDIRECT)

I have collaborated with and received in-kind support from Anglo American, Barrick Mining Corporation, Codelco, Compañía Minera del Pacífico, Freeport McMoRan, Kinross, Lundin Mining Corporation, Newmont Corporation, Nevada Gold Mines, Teck Resources Limited.

## **SYNCHROTRON BEAM TIME AWARDED** (competitive, peer-reviewed, ranked proposals)

2025	12 shifts at the Advanced Photon Source, Argonne, IL
2022	24 shifts at the Advanced Photon Source, Argonne, IL
2022	9 shifts at the Swiss Light Source, Zurich, Switzerland
2021	18 shifts at the National Synchrotron Light Source, Brookhaven, NY
2020	9 shifts at the Advanced Photon Source, Argonne, IL

2020	12 shifts at the Swiss Light Source, Zurich, Switzerland
2020	9 shifts at the National Synchrotron Light Source, Brookhaven, NY
2019	6 shifts at the National Synchrotron Light Source, Brookhaven, NY
2018	18 shifts at the Advanced Photon Source, Argonne, IL
2017	18 shifts at the Advanced Photon Source, Argonne, IL
2016	27 shifts at the Advanced Photon Source, Argonne, IL
2015	27 shifts at the Advanced Photon Source, Argonne, IL
2014	9 shifts at the Advanced Photon Source, Argonne, IL
2013	21 shifts at the Advanced Photon Source, Argonne, IL
2012	18 shifts at the Advanced Photon Source, Argonne, IL

## **COURSES TAUGHT**

Scale of 1.0 = lowest ranking, to 5.0 = highest ranking

Q1 = Overall, this was an excellent course; Q2 = Overall, the instructor was a good teacher. Enrollment = Total student enrollment; NC = Not collected

Univer	sity of Michigan (u = und	ergraduate; g = graduate)				
<u>Year</u>	<u>Format</u>	Course Name	<b>Credits</b>	<b>Enrolled</b>	<u>Q1</u>	<u>Q2</u>
2025	Lecture	"EARTH/GEOG 101	1	188		
	Lecture	"EARTH/GEOG 102	1	244		
	Lecture	"EARTH/ENVIRON 380	4	120	4.9	4.8
2024	Lecture	"EARTH/GEOG 101	1	188	4.8	4.7
	Lecture	"EARTH/GEOG 102	1	244	4.7	4.8
	Lecture	"EARTH/GEOG 201	3	70	4.9	4.8
	Lecture	"EARTH/ENVIRON 380	3	40	4.8	4.9
	Lecture/ Discussion	"EARTH/ENVIRON 380	4	115	5.0	4.9
2023	Field/Lecture	"EARTH/ENVIRON 344	4	20	5.0	4.8
	Lecture/ Discussion	<sup>u</sup> ALA 104	1	115	4.8	5.0
	Lecture	<sup>u</sup> EARTH 116	4	17	4.8	4.8
2022	Lecture/Discussion	<sup>u</sup> ALA 104	1	97	4.9	4.9
	Field/Lecture	"EARTH/ENVIRON 344	4	17	4.8	4.9
2021	Lecture/ Discussion	<sup>u</sup> ALA 104	1	107	4.9	4.7
	Lecture/ Discussion	"EARTH/ENVIRON 380	4	155	4.8	4.8
	Lecture	"EARTH/ENVIRON 344	4	15	4.9	4.8
2020	Lecture	"EARTH/ENVIRON 380	4	72	4.3	4.7
	Lecture	"EARTH/ENVIRON 344	4	30	4.7	4.3
	Lecture/ Discussion	"EARTH/ENVIRON 119	4	55	4.8	4.8
	Lecture/ Discussion	<sup>u/g</sup> EARTH 435	3	15	4.9	4.7
2019	Lecture/ Discussion	gEARTH 582	4	6	4.6	4.6
	Lecture/ Discussion	"EARTH/ENVIRON 380	4	131	4.5	4.7
	Lecture/ Discussion	"EARTH/ASTRO 255	3	30	4.6	4.9
	Field/Lecture	"EARTH/ENVIRON 344	4	15	4.8	5.0
	Lecture	"EARTH/ENVIRON 102	1	42	4.7	4.6
2018	Lecture/ Discussion	"EARTH/ENVIRON 380	4	129	4.6	4.8
	Lecture/ Discussion	"EARTH/ASTRO 255	3	32	4.8	4.9
	Field/Lecture	"EARTH/ENVIRON 344	4	14	5.0	5.0
2017	Lecture/ Discussion	"EARTH/ENVIRON 380	4	129	4.5	4.8
	Lecture/ Discussion	"EARTH/ASTRO 255	1	36	4.4	4.9

	Field/Lecture	"EARTH/ENVIRON 344	4	19	5.0 4.8
	Lecture	"EARTH/ENVIRON 102	1	67	4.5 4.7
	Lecture/ Discussion	"EARTH/ENVIRON 119	4	92	4.7 4.8
2016	Lecture/ Discussion	"EARTH/ENVIRON 380	4	140	4.9 4.7
	Lecture/ Discussion	"EARTH/ASTRO 255	1	32	4.9 4.9
	Lecture	"EARTH/ENVIRON 344	4	22	4.9 5.0
	Lecture	"EARTH/ENVIRON 102	1	64	4.7 4.3
	Lecture/ Discussion	"EARTH/ENVIRON 119	4	96	4.8 4.9
2015	Lecture/ Discussion	"EARTH/ENVIRON 380	4	115	4.7 4.9
	Lecture/Discussion	"EARTH/ASTRO 255	1	30	4.8 4.8
	Lecture/Discussion	gEARTH 582	4	5	5.0 5.0
	Field/Lecture	"EARTH/ENVIRON 344	4	19	4.7 4.8
	Field/Lecture	<sup>u</sup> EARTH 435	1	22	4.8 4.9
	Lecture	"EARTH/ENVIRON 102	1	80	4.8 4.9
	Lecture/Discussion	uEARTH/ENVIRON 119	4	4.6	5.0 4.8
	Lecture	"EARTH 435	1	12	4.3 4.7
2014	Lecture/Discussion	"EARTH/ENVIRON 380	4	109	4.8 4.8
2017	Field Course	"EARTH 436	1	19	4.7 4.8
	Field Course	"EARTH/ENVIRON 344	4	4.8	4.9 5.0
	Lecture/Discussion	EARTH 582	4	5	4.5 4.8
2013	Lecture	"EARTH/ENVIRON 344	4	17	4.9 4.9
2013	Lecture/Discussion	"EARTH/ENVIRON 380	4	57	4.8 4.7
Liniver	sity of Nevada Las Vegas		4	37	4.0 4.7
2012	Lecture/Lab	<sup>u</sup> Physical Geology	4	4	4.6 4.5
2012	Lecture/Lab	"Physical Geology	4	4	4.6 4.5
2011			=		
	Lecture/lab	gMetallic Ore Deposits	4	18	4.5 4.8
	Lecture/lab	"Metallic Ore Deposits	4	9	4.8 4.7
	Lecture	"Physical Geography	3	3	4.6 4.8
0040	Lecture/lab	"Physical Geology	4	4	4.1 4.5
2010	Lecture/lab	"Physical Geography	3	17	4.3 4.8
	Lecture/lab	"Optical Mineralogy	4	13	4.8 4.9
	Lecture/lab	<sup>u</sup> Physical Geology	4	45	4.6 4.5
2009	Lecture/lab	gMagma PTX	4	6	4.5 4.8
	Lecture/lab	<sup>u,g</sup> Metallic Ore Deposits	4	4	4.7 4.9
	Lecture/lab	<sup>u</sup> Physical Geography	4	67	4.6 4.4
	Lecture	gTime Management	1	18	4.8 4.9
2009	Lecture/lab	uPhysical Geology	3	113	4.4 4.5
	Lecture/lab	<sup>u</sup> Physical Geology	3	4.5	4.6 4.5
	Lecture/lab	"Optical Mineralogy	3	12	4.8 4.7
2008	Lecture/lab	uPhysical Geography	3	74	4.8 4.6
	Lecture/lab	gMagma evolution	3	7	4.5 4.8
	Lecture/lab	<sup>u</sup> Physical Geology	4	93	4.8 4.3
	Lecture/lab	<sup>u</sup> Optical Mineralogy	3	12	4.6 4.8
2007	Lecture/lab	<sup>u</sup> Physical Geology	4	4	4.5 4.7
	Lecture/lab	<sup>u</sup> Physical Geography	3	63	4.6 4.9
	Lecture/lab	gTectonics, Petrology	3	9	4.6 4.5
	Lecture/lab	<sup>u</sup> Optical Mineralogy	4	14	4.6 4.8
2006	Lecture/lab	<sup>u</sup> Physical Geology	4	48	4.2 4.3

	Lecture/lab	"Physical Geography	3	20	4.3	4.5
	Lecture/lab	<sup>g</sup> Magma Emplacement	3	5	4.9	4.7
2005	Lecture/lab	<sup>u</sup> Physical Geology	4	63	4.7	4.5
The Jol	nns Hopkins University					
2004	Looturo/lob	<sup>g</sup> Ore Deposit	4	7	47	4.0
2004	Lecture/lab	Geochemistry	4	/	4.7	4.9
Univer	sity of Maryland					
2005	Lecture/lab	"Optical Mineralogy	4	13	4.3	4.4
	Lecture/lab	"Physical Geology	4	53	4.8	4.6
2004	Lecture/lab	"Optical Mineralogy	4	9	4.6	4.5
	Lecture/lab	<sup>u</sup> Physical Geology	4	39	4.7	4.8
2003	Lecture/lab	"Optical Mineralogy	4	16	4.4	4.5
	Lecture/lab	"Physical Geology	4	47	4.9	4.8
2002	Lecture/lab	"Physical Geology	4	38	4.7	4.4
Northern Virginia Community College						
2000	Lecture/lab	<sup>u</sup> Physical Geology	4	25	4.5	4.8
	Lecture/lab	"Historical Geology	4	32	4.3	4.5
1999	Lecture/lab	"Physical Geology	4	29	4.8	4.7
	Lecture/lab	"Historical Geology	4	34	4.6	4.5
1998	Lecture/lab	<sup>u</sup> Physical Geology	4	27	4.5	4.6
	Lecture/lab	"Historical Geology	4	23	4.4	4.7

## POSTDOCTORAL RESEARCH FELLOWS (underrepresented)

2021 – 2024	José Tomás Ovalle Ortega
2021 – 2023	Xuyang Meng
2013 – 2016	Adrian Fiege
2013 – 2014	Yuping Yang

## **CURRENT GRADUATE STUDENTS** (primary advisor; *underrepresented group*)

2025 – present Anne Lammes, MSc.2025 – present Amanda Holmes, MSc.

2021 – present Andres Felipe Gonzalez Duran, PhD

## **FORMER GRADUATE STUDENTS** (primary advisor; *underrepresented group*)

2023 – 2025	Evan Hirsh, MSc.
2022 – 2024	Allyson Murray, PhD (did not finish)
2020 – 2024	Daniel Blakemore, PhD
2020 – 2024	Chris Emproto, PhD
2018 – 2023	Jackie Wrage, PhD
2019 – 2023	Justin Casaus, MSc.
2017 – 2022	Maria Alejandra Rodriguez Mustafa, PhD,
2015 – 2019	Nikita La Cruz, PhD
2014 – 2019	Tristan Childress, PhD
2014 – 2018	Brian Konecke, PhD
2016 – 2018	Gephen Sadove, MSc.
2015 – 2016	Daniel Korfeh, MSc.
2013 – 2019	Jaayke Knipping, PhD
2012 – 2015	Tom Hudgins, PhD

2011 – 2015	Laura Bilenker, PhD
2010 – 2014	<i>Liz Tani</i> s, PhD
2012 – 2014	Kevin Meazell, MS
2011 – 2014	Ember Flagg, MSc.
2010 – 2012	Seth Schueler, MSc.
2010 – 2012	Lindsey Clark, MSc.
2011 – 2012	Jane Didaleusky, MSc.
2008 – 2010	Nathan Eck, MSc.
2008 – 2010	Brian Aillaud, MSc.
2007 – 2011	Kelly Robertson, PhD
2007 – 2009	Steve Maglio, MSc.
2006 – 2008	Greg Zellner, MSc.
2006 – 2008	Zach Artz, MSc.
2006 – 2010	Aaron Bell, PhD

## **VISITING SCHOLARS HOSTED IN MY LAB**

Yanbing , Chinese Academy of Sciences	2025-2026
Jaayke Knipping, University of Hannover	2013-2016
Benjamin Winkler, University of Hannover	2014
Stefan Linsler, University of Hannover	2014

## **UNDERGRADUATE STUDENTS MENTORED**

underrepresented group; UROP = Undergraduate Research Opportunity Program

Tianyi Li	2023-2024	academic year independent study
Hannah Baker	2023-2024	academic year independent study
Hannah Yoran		academic year independent study
Amartya Kattemalavadi		Honors thesis
James Roush		Senior thesis
Megan Ballema		UROP
Charlotte Corey		UROP
lfechukwu Ezeokoli		UROP
Asa Garcia		UROP
Carmen Hernandez		UROP
Jordyn Ives		UROP
Aiden Moskal-Linder		UROP
Mallory Stabile		UROP
Ela Trivedi		UROP
Hannah Yorah		UROP
Samantha Barnes	2021 – 2022	UROP
Andres Velasco		UROP
Henry Bushell		UROP
Sabrina Lam		academic year independent study
lan Goan	2021 – 2022	Honors thesis
Amartya Kattemalavadi		academic year independent study
Kyle Lachance		academic year independent study
Madeleine Frank	2020 – 2021	Honors thesis
Amartya Kattemalavadi		academic year independent study

Jayson Toweh

**Erich Eberhard** 

Mark Finlay

Kyle Lachance academic year independent study Anastasia Alexandrova Winter term independent study Elizabeth Ratajczyk Winter term independent study Danielle Turner Winter term independent study Roland Amarteifio 2019 - 2020academic year terms independent study Madelynn Carter academic year terms independent study Kristen Hayden Honors thesis Idrees Schieber Fall term independent study Roland Amarteifio academic year term independent study Madeleine Frank Fall term independent study Elizabeth Ratajczyk 2018 - 2019Fall term independent study Anastasia Alexandrova academic year terms independent study Madeleine Frank Summer independent study/research Summer independent study/research Elizabeth Ratajczyk **Grant Dukus** Summer independent study/research Logan Vear academic year independent study Sally Ruan academic year independent study Catherine Garton academic year independent study Elena Essa academic year independent study **Gregory Cogut Honors Thesis** Lydia Whitbeck academic year independent study Nathan Houghteling 2017 - 2018academic year independent study Mitchell Mead academic year independent study Elizabeth Rogers **Honors Thesis** Elena Essa academic year independent study Anne Rosett **Honors Thesis** Will Arnuk **Honors Thesis** Sarah Dieck **Honors Thesis** Alexandria Shand academic year independent study Bridget Lockman academic year independent study Zachary Brodkey academic year independent study Erich Eberhard academic year independent study Elizabeth Oliphant academic year independent study Lydia Whitbeck academic year independent study Katherine Mather academic year independent study Liam Wolfram academic year independent study **Emma Forbes** academic year independent study Will Arnuk academic year independent study Krysten Dorfman academic year independent study Ahana Shanbhogue academic year independent study Anne Rosett academic year independent study Lydia Whitbeck academic year independent study Jessica Hicks 2016 - 2017academic year independent study Anne Canavati academic year independent study Elizabeth Oliphant academic year independent study

academic year independent study

academic year independent study

academic year independent study

Thomas West		academic year independent study
Christopher Walker		academic year independent study
Emily Schottenfels	2015 – 2016	academic year independent study
Avery McIntyre		academic year independent study
Yuka Yamanishi		academic year independent study
Andrea Davila	2013 – 2014	Honors Thesis
Alex Wong		academic year independent study
Ryan Vanderwoude		academic year independent study
Ray Mahaffy		academic year independent study
University of Nevada Las Vega	as	
Brett Perry	2010 – 2011	academic year independent study
Kirellos Sefein		academic year independent study
Aaron Acena	2009 – 2010	academic year independent study
Lindsey Clark		academic year independent study
Seth Pages	2007 – 2008	academic year independent study
Jason Norgan		academic year independent study
Carl Swenberg	2006 – 2008	academic year independent study
Pat DelVecchio		academic year independent study
Jonathan Carter		academic year independent study
Annalee Sendis	2007	Summer independent study/research
Patrick Sims	2007	Summer independent study/research

#### Member, Ph.D. Committee (Year Completed)

Amanda Florea (in progress) Kaitlyn Koshurba (in progress); Julisan Street (finished with MSc. 2024); Bryanne Gordon (in progress); Mack Taylor (in progress); Bryanne Gordon (in progress); Julisan Street (in progress); Sha Chen (2022); Sooyeon Kim (2022); Sarah Brehm (2021); Juliana Mesa (2021); James Jolles (2020); Youngjae Kim (2019); Xiaofei Pu (2018) Chenghuan Guo (2017); Jiachao Liu (2017); Peng Ni (2017); Racheal Johnson (2015, UNLV); Laura Waters (2013); Audrey Rager (2012, UNLV); Chris Adcock (2012, UNLV); Denise Honn (2012, UNLV); Timo Hoffman (2009, UNLV Chemistry)

## External Member, Ph.D. Committee

Bin Hu, Monash University, 2025
Eliza Smith, University of Western Australia, 2023
Sigma Dwivedy, Indian Institute of Technology, India School of Mines, 2022
Alice Alex, University of Toronto, 2021
Lillian Kendall-Langley, University of Western Australia, 2021
Guillaume Lesage, University of British Columbia, 2019
Christine Wawryk, University of Adelaide, 2017
Nicole S. Keller, Australian National University, 2008

## Member, PhD Candidacy Examination Committee (Year Exam Taken)

Amanda Flores (2025); Andres Felipe Gonzalez Duran (2023); Mack Taylor (2023); Bryanne Gordon (2023), Daniel Blakemore (2021); Chris Emproto (2021); Justin Casaus (2021); Jackie Wrage (2020); Allison Pease (2020); Maria Alejandra Rodriguez Mustafa (2019); Sooyeon Kim (2019); Sarah Brehm (2017); Sha Chen (2017); Nikita La Cruz (2016); Youngjae Kim (2016); Brian Konecke (2016); Tristan Childress (2016); Meredith Cologero (2016); Evan Killeen (2015); James Jolles (2015); Chenghuan Guo (2014); Liz Tanis (2013); Xiaofei Pu (2013); Laura Bilenker (2013); Kate Volk (2013); Tom

Hudgins (2012); Chris Adcock (2012); Breetha Alagappan (2012); Racheal Johnson (2010); Denise Honn (2010); Kelly Robertson (2011); Aaron Bell (2008)

## Member, MSc. Thesis Committee (Year Completed)

Madeleine Frank (2023); Bryanne Gordon (2023; David Levine (2016); Forrest Gilfoy (2016); Kate Turner (2015); Carla Eichler (2012); Jordan Armstrong (2012); Jeevan Jayakody (2010); John Howard (2010); Elizabeth Tanis (2010); Ashley Tibbetts (2009); Daniel Antonio (2009); Lisa Hancock (2008)

**PUBLICATIONS** (Google Scholar: h-index = 43; i10-index = 78; citations = 6855

Invited papers; postdoc; graduate student; undergraduate student

All of my publications can be downloaded from THIS DROPBOX FOLDER.

#### **BOOKS**

- Kesler, S.E., Simon, A.C. (2015) Mineral Resources, Economics, and the Environment. Cambridge Press. ISBN 9781107074910, 446 pp.
- Perkins, D., Henke, K.R., Simon, A.C., Yarbrough, L.D. (2019) Earth Materials: Components of a Diverse Planet. Routledge, Taylor & Francis Group. ISBN 9780367185947, 556 pp.

## **PEER-REVIEWED ARTICLES**

#### 2000

Nekvasil, H., **Simon, A.C.**, and Lindsley, D.H. (2000) Crystal fractionation and the evolution of intra-plate hy-normative igneous suites: Insights from their feldspars. Journal of Petrology, 41, 1743-1757.

#### 2003

**Simon, A. C.**, Pettke, T., Candela, P.A., Piccoli, P.M. and Heinrich, C.A. (2003) Experimental determination of Au solubility in rhyolite and magnetite: Constraints on magmatic gold budgets. American Mineralogist, 88, 1644-1651.

#### 2004

**Simon, A.C.**, Pettke, T., Candela, P.A., Piccoli, P.M. and Heinrich, C.A. (2004) Magnetite solubility and iron transport in magmatic-hydrothermal environments. Geochimica et Cosmochimica Acta, 68, 4905-4914.

#### 2005

**Simon, A.C.**, Pettke, T., Candela, P.A., Piccoli, P.M. and Heinrich, C.A. (2005) Gold partitioning in melt vapor-brine systems. Geochimica et Cosmochimica Acta, 69, 3321-3335.

#### 2006

**Simon, A.C.**, Pettke, T., Candela, P.A., Piccoli, P.M., Heinrich, C. (2006) Copper partitioning in a melt-vapor-brine-magnetite-pyrrhotite assemblage. Geochimica et Cosmochimica Acta, 70, 5583-5600.

- Boudreau, A., and **Simon, A.C.** (2007) Crystallization and degassing in the basement sill, McMurdo Dry Valleys, Antarctica. Journal of Petrology, 48(7), 1369-1386.
- Hersum, T., Marsh, B., **Simon, A.C.** (2007) Contact partial melting of granitic country rock, melt segregation, and re-injection as dike into Ferrar Sills, McMurdo Dry Valleys, Antarctica. Journal of Petrology, 48(11), 2125-2148

- **Simon, A.C.**, Frank, M., Pettke, T., Candela, P.A., Piccoli, P.M., Heinrich, C., Glascock, M. (2007) An evaluation of synthetic fluid inclusions for the purpose of trapping equilibrated coexisting immiscible fluids at experimental PVTX conditions. American Mineralogist, 92, 124-138.
- **Simon, A.C.**, Pettke, T., Candela, P.A., Piccoli, P.M., Heinrich, C. (2007) The partitioning behavior of As and Au in a S-free and S-bearing magmatic systems. Geochimica et Cosmochimica Acta, 71,1764-1782.
- **Simon, A.C.**, King, R.L., Pettke, T. and Usui, T. (2007), Chemical and physical processes affecting element mobility from the slab to the surface. In Simon, A.C., King, R.L., Pettke, T. and Usui, T., eds., Chemical and physical processes affecting element mobility from the slab to the surface, Chemical Geology, 239, 179-181.

- **Simon, A.C.**, Pettke, T., Candela, P.A., Piccoli, P.M., Heinrich, C. (2008) The partitioning behavior of silver in a vapor brine rhyolite melt assemblage. Geochimica et Cosmochimica Acta, 72(6), 1638-1659.
- **Simon, A.C.**, Candela, P.A., Piccoli, P.M., Mengason, M. and Englander, L. (2008) The effect of crystal melt partitioning on the budgets of Cu, Au and Ag. American Mineralogist, 93, 1437-1448.

#### 2009

- Bell, A., Simon, A.C. and Guillong, M. (2009) Experimental constraints on Pt, Pd and Au partitioning and fractionation in silicate melt sulfide oxide aqueous fluid systems at 800°C, 150 MPa and variable sulfur fugacity. Geochimica et Cosmochimica Acta, 73(19), 5778-5792.
- **Simon, A.C.** and Pettke, T. (2009) Platinum solubility and partitioning in a felsic melt vapor brine assemblage. Geochimica et Cosmochimica Acta, 73(12), 438-454.

#### 2011

- *Bell, A.*, **Simon, A.C.** and Guillong, M. (2011) Gold solubility in oxidized and reduced, water saturated mafic melt. Geochimica et Cosmochimica Acta. 75(7), 1718-1732.
- Bell, A., and **Simon, A.C.** (2011) Evidence for the alteration of the Fe<sup>3+</sup>/ΣFe of silicate melt caused by the degassing of chlorine-bearing aqueous volatiles. Geology. 39(5), 499-502.
- Frank, M.R., Simon, **A.C.**, Pettke, T., Candela, P., Piccoli, P. (2011) Gold and copper partitioning in magmatic-hydrothermal systems at 800°C and 100 MPa. Geochimica et Cosmochimica Acta. 75(9), 2470-2482.
- Muntean, J., Cline, J, **Simon, A.C.** and Longo, A. (2011) Magmatic-hydrothermal origin of Nevada's Carlin-type gold deposits. Nature Geoscience, 4, 122-127.
- **Simon, A.C.** and Ripley, E. (2011) The Role of Magmatic Sulfur in the Formation of Ore Deposits. In *Sulfur in Magmas and Melts: Its Importance for Natural and Technical Processes*, edited by Harald Behrens and James D. Webster, Berlin, Boston: De Gruyter, 2011, pp. 513-578.

- Audétat, A. and **Simon, A.C.** (2012) Magmatic controls on porphyry Cu genesis. In: Economic Geology Monograph in honor of Richard Sillitoe. Eds. J.W. Hedenquist, M. Harris, F. Camus, Society of Economic Geologists Special Publication Number 16, 553-572. https://app.ingemmet.gob.pe/biblioteca/pdf/SEG-SP16-553.pdf
- Pettke, T., Oberli, F., Audétat, A., Guillong, M., **Simon, A.C.**, Hanley, J.J., Klemm, L.M. (2012) Recent developments in element concentration and isotope ratio analysis of individual fluid inclusions by laser ablation single and multiple collector ICP-MS. Ore Geol Reviews, 44, 10-38.
- Tanis, E.A., Simon, A.C., Tschauner, O., Chow, P., Xiao, Y., Shen, G., Hanchar, J.M., Frank, M. (2012) Solubility of xenotime in 2 M HCl aqueous fluid from 1.2 to 2.6 to GPa and 300 to 500 C. American Mineralogist, 97, 1708-1713.

Robertson, K., Simon, A.C., Pettke, T., Smith, E., Selyangin, O., Kiryukhin, A., Mulcahy, S.R., Walker, J.D. (2013) Melt inclusion evidence for magma evolution at Mutnovsky volcano, Kamchatka. Geofluids, 13, 421-439.

## 2014

- Kirk, J.D., Ruiz, J., Kesler, S.E., **Simon, A.C.**, Muntean, J.L. (2014) Re-Os age of the Pueblo Viejo epithermal deposit, Dominican Republic. Economic Geology, 109, 503-512.
- **Simon, A.C.**, Yogodzinski, G.M., *Robertson, K.*, Smith, E., Selyangin, O., Kiryukhin, A., Mulcahy, S.R., Walker, J.D. (2014) Evolution and genesis of volcanic rocks from Mutnovsky Volcano, Kamchatka. Journal of Volcanology and Geothermal Research, 286, 116-137.

#### 2015

- <u>Fiege, A.</u>, Vetere, F., Iezzi, G., **Simon, A.C.**, Holtz, F. (2015) The roles of decompression rate and volatiles (H<sub>2</sub>O+Cl±CO<sub>2</sub>±S) on crystallization in (trachy-) basaltic magma. Chemical Geology, 411, 211-322
- Hudgins, T., Mukasa, S.B., **Simon, A.C.**, Moore, G., Barifaijo, E. (2015) Melt inclusion evidence for CO<sub>2</sub>-rich melts beneath the western branch of the East African Rift: Implications for long-term storage of volatiles in the deep lithospheric mantle. Contributions to Mineralogy and Petrology, 169, Number 5, 1-18, 10.1007/s00410-015-1140-9
- Kesler, S.E., Simon, A.C. (2015) Mineral Resources, Economics, and the Environment. Cambridge Press. ISBN 9781107074910, 446 pp.
- Knipping, J.L., Bilenker, L., Simon, A.C., Reich, M., Barra, F., Deditius, A., Lundstrom, C., B Bindeman, I., Munizaga, R. (2015) Giant Kiruna-type deposits form by efficient flotation of magmatic magnetite suspensions. Geology, 43, 591–594, doi:10.1130/G36650.1.
- Knipping, J.L, Bilenker, L., Simon, A.C., Reich, M., Barra, F., Deditius, A., Wälle, M., Heinrich, C.A., Holtz, F., Munizaga, R. (2015) Trace elements in magnetite from massive iron oxide-apatite deposits indicate a combined formation by igneous and magmatic-hydrothermal processes. Geochimica et Cosmochimica Acta, 171, 15-38.
- Tanis, E.A., **Simon, A.C.**, Tschauner, O., Chow, P., Xiao, Y., Burnley, P., Cline II, C., Hanchar, J.M., Pettke, T., Shen, G., Zhou, Y. (2015) The mobility of Nb in rutile-saturated NaCl- and NaF-bearing aqueous fluids from 1-6.5 GPa and 300-800 C. American Mineralogist, 100, 1600-1609.

- Bilenker, L., Simon, A.C., Reich, M., Lundstrom, C., Bindeman, I., Munizaga, R. (2016) Fe-O stable isotope pairs elucidate a high-temperature origin of Chilean iron oxide-apatite deposits. Geochimica et Cosmochimica Acta, 177, 94-104.
- Childress, T.M., Simon, A.C., Day, W.C., Lundstrom, C.C., Bindeman, I.N. (2016) Iron and oxygen isotope signatures of the Pea Ridge and Pilot Knob magnetite–apatite deposits, southeast Missouri, USA. Economic Geology, 111, 2033-2044.
- Reich, M., **Simon, A.C.**, Deditius, A., Barra, F., Chryssoulis, S., Lagas, G., Tardani, D., *Knipping, J.*, *Bilenker, L.*, Sanchez-Alfaro, P., Roberts, M.P., Munziga, R. (2016) Trace element signature of pyrite from the Los Colorados iron oxide-apatite (IOA) deposit, Chile: A missing link between Andean IOA and IOCG systems? Journal of Economic Geology, 111, 743-761.
- Tanis, E.A., Simon, A.C., Zhang, Y., Chow, P., Xiao, Y., Hanchar, J.M., Tschauner, O., Shen, G. (2016) Rutile solubility in NaF-NaCl-KCl-bearing aqueous fluids at 0.5-2.79 GPa and 250-650°C. Geochimica et Cosmochimica Acta, 177, 170-181.
- Yang, Y., Zhang, Y., Simon, A.C., Ni, P. (2016) Cassiterite dissolution and Sn diffusion in silicate melts of variable water content. Chemical Geology, 441, 162-176.

- Barra, F., Reich, M., Selby, D., Rojas, P., **Simon, A.C.**, Salazar, E., Palma, G. (2017) Unraveling the origin of the Andean IOCG clan: A Re-Os isotopes approach. Ore Geology Reviews. 81, 62-78.
- Bilenker, L.B. Van Tongeren, J., Lundstrom, C.C., **Simon, A.C**. (2017) Iron isotopic evolution during fractional crystallization of the uppermost Bushveld Complex layered mafic intrusion. Geochemistry, Geophysics, Geosystems, 18 (3), 956-972.
- Maroun, L.R.C., Cline, J.S., **Simon, A**., Anderson, P., Muntean, J. (2017) High-Grade Gold Deposition and Collapse Breccia Formation, Cortez Hills Carlin-Type Gold Deposit, Nevada, USA. Economic Geology, 112, 707-740.
- <u>Fiege, A.</u>, Ruprecht, P., **Simon, A.C.**, Bell, A.S., Göttlicher, J., Newville, M., Lanzirotti, T., Moore, G. (2017) Calibration of Fe XANES for high-precision determination of Fe oxidation state in glasses: Comparison of results obtained at different synchrotron radiation sources. American Mineralogist, 102, 369-380.
- <u>Fiege, A.</u>, Ruprecht, P., **Simon, A.C.** (2017) A magma mixing redox trap that moderates mass transfer of sulfur and metals. Geochemical Perspectives Letters, 3, 190-199.
- Konecke, B., Fiege, A., Simon, A.C., Parat, F., Stechern, A. (2017) Co-variability of S<sup>6+</sup>, S<sup>4+</sup> and S<sup>2-</sup> in apatite as a function of oxidation state implications for a new oxybarometer. American Mineralogist, 102, 548-557.
- Konecke, B., Fiege, A., Simon, A.C., Holtz, F. (2017) Cryptic metasomatism during late-stage lunar magmatism implicated by sulfur in apatite. Geology, 45 (8): 739-742.
- *Ni, P.*, Zhang, Y., **Simon, A.C.**, Gagnon, J. (2017) Cu and Fe diffusion in rhyolitic melts during chalcocite "dissolution": Implications for porphyry ore deposits and tektites. American Mineralogist. 102, 1287-1301.
- Kim, Y., Konecke, B., Fiege, A., Simon, A.C., Becker, U. (2017) An ab-initio study of the energetics and geometry of sulfide, sulfite and sulfate incorporation into apatite: The thermodynamic basis for using this system as an oxybarometer. American Mineralogist, 102, 1646-1656.

- Arnuk, W., Dorfman, K., Forbes, E., Shanbogue, A., Soberal, N., **Simon, A.C.**, Fancy, S., Knoop, P. (2018) Solar microgrid feasibility study for the City of Ann Arbor (2017). University of Michigan Energy Institute.
- Deditius, A., Reich, M., **Simon, A.C.**, Suvorova, A., *Knipping, J.*, Roberts, M.P., Rubanov, S., Dodd, A., Saunders, M. (2018) Nanogeochemistry of hydrothermal magnetite. Contributions to Mineralogy and Petrology, 173(46)
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**ABSTRACTS** I regularly deliver talks at academic and industry meetings and universities, and all members of my research group present their research at one or more professional meetings annually. I do not track abstract submissions.