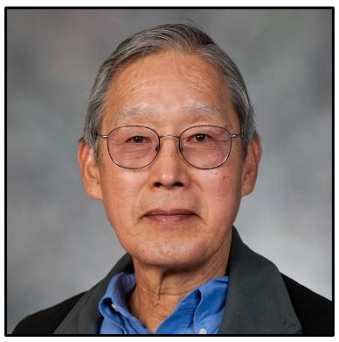
CCUS Conference Week 2022

Arne Graue is Professor of Physics at the Department of Physics and Technology, University of Bergen (UoB), Norway. He is Head of "Reservoir Physics – Energy Technology and CO2 Storage (CCUS)". His scientific interest is within Reservoir Physics emphasizing heterogeneous and fractured reservoirs, multiphase flow in porous media, in-situ fluid saturation imaging, laboratory investigation of Integrated EOR-techniques, Carbon Capture Utilization and Storage (CCUS), CO2 sequestration and gas hydrates. He has published more than 300 scientific publications and supervised 218 PhD and MS students. He has MS-degree in Experimental Nuclear Physics and PhD degree in Reservoir Physics, all from UoB. He has two worldwide patents; a carbon neutral gas production technology with simultaneous CO2 storage and a reduced carbon footprint oil production technology with CO2 storage, both technologies provide improved sustainable industrial revenues and contribute to mitigating climate change. Graue has been Invited Visiting Scientist/Professor at Massachusetts Institute of Technology (MIT), U. of Wyoming, U. of Kansas, at ConocoPhillips Research Center, OK, and at Rice University in Houston, TX, USA. He is coordinator for a collaboration of 11 universities in 5 countries on EOR in fractured reservoirs and is heading CCUS research collaborations between Norway and the USA. The past 10 years he has provided advise on energy and CCUS technologies to three of Norway's Consul Generals in Houston. He Chairs the Executive Boards of: - Petroleum Research School of Norway, where all universities in Norway are represented, - Colorado Norway Clean Energy Transition Research and Educational Collaboration (ColNor), and - NorTex Petroleum Cluster.

Steve Melzer is a consulting engineer in Midland, Texas specializing in CO_2 injection projects, enhanced oil recovery (EOR), reservoir properties, secure geologic storage, and horizontal well reservoir depressuring projects. He also provides engineering and business planning services for a variety of U.S. and International commercial clients in the oil and gas, industrial gas, coal and power sectors as well as advising policy makers and non-governmental organizations on the subject of CO_2 EOR and carbon capture and storage. He has also originated and operated many exploration and production projects in the oil and gas sector. He has conducted research on the origin and distribution of residual oil zones and their commercial exploitation through the use of both CO_2 EOR and horizontal wells. He is currently documenting a new contribution and science-based explanation of mixed- and oil-wettability in carbonates and certain clastic reservoir rocks. He has been the director of the 27 years of the annual CO_2 Flooding Conference and assists in organizing the EOR Carbon Management Workshop, both held each year in December in Midland, Texas (next being Dec 5-8, 2022). He has served on the Governor of Texas' FutureGen Board, as a past Director of The University of Texas of the Permian Basin's Petroleum Industry Alliance, Plains CO_2 Reduction's technical advisory board, and continues to serve on several other out of state and local Advisory Boards and Councils. Steve resides in Midland, Tx. He has a BS in geological engineering from Texas A&M and a MS degree in Engineering (Rock Mechanics) from Purdue University.

Mike Nasi is a partner with Jackson Walker LLP where he practices environmental and energy law. Mike attended the University of New Mexico, the University of Texas, the University of Houston Law School and the University of Texas School of Law. He has been working with clients on project development and practicing before state and federal regulatory agencies and appellate courts for 28 years. Mr. Nasi's law practice spans across numerous federal and related state environmental and utility regulatory programs with a focus on environmental and utility regulatory counseling and litigation for the power sector as well as project development incentives and power market reforms. Mike is counsel for energy interests in state, regional and national litigation and policy initiatives including matters pending before several state and federal agencies and multiple Federal Circuit Courts of Appeals and the Supreme Court of the United States. Mike has been an expert witness and speaker at hearings, energy policy events, and classrooms across the country, including the White House and the United Nations, and is published in several trade, law, and business journals on environmental and energy law. Mr. Nasi participates on advisory boards or as counsel for several state and regional energy research initiatives including the Wyoming Energy Agency, North Dakota's Energy & Environmental Research Center (EERC) Foundation Board, the Southern States Energy Board, the Energy Council, and the University of Houston Center for Carbon Management in Energy (CCME). He is consistently recognized on several "Best Lawyer" lists, and was awarded Law 360's "Energy & Environmental Trailblazer Award" for his development of a range of financial and regulatory incentives to facilitate the deployment of CCUS projects.

Mike Matson is an Associate Director with an emphasis on Carbon Capture, Utilization, and Storage (CCUS) at Boston Consulting Group (BCG), a global leader in climate change and sustainability consulting. Mike assists clients exploring the business of CCUS across four main topic areas: strategic development, market & asset identification, project development & execution, and commercial readiness & mobilization of CCUS. After studying Chemistry at the US Naval Academy and obtaining his PhD from Rice University, Mike started his career as a tenure-track Assistant Professor at the University of Houston-Downtown. There, he authored the iconic, yellow-covered "Inorganic Chemistry for Dummies" and began interfacing with the local Houston energy industry while helping students with job placements. After realizing the significant challenges facing both climate and energy, Mike became a licensed petroleum engineer working on CO2-enhanced oil recovery (CO2-EOR) projects in West Texas with both KinderMorgan CO2 and Occidental Low Carbon Ventures. Using experiences from drilling and reservoir engineering, Mike then joined a Denver-based start-up, Carbon America, as their VP of Subsurface and VP of Projects, helping design and implement full-scale CCUS projects that captured value from the US 45Q and various Low Carbon Fuel Standard (LCFS) programs. Outside of work, you can find Mike hiking 14'ers in the summer or skiing in the winter with his wife Samantha, two great kids, Morgan & Cooper, and rescue Labrador, Rocky. He also has earned multiple Guinness World Records as an ocean rower and was the skipper of the first three-man rowboat to cross the Atlantic Ocean using only oars.



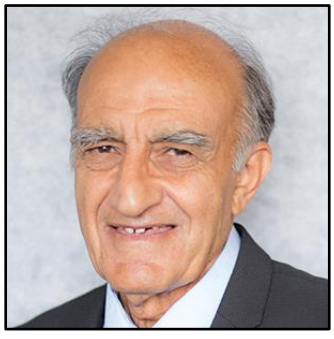
George Hirasaki is the A.J. Hartsook Professor Emeritus in the Department of Chemical and Biomolecular Engineering at Rice University. He graduated with a B.S. from Lamar University in 1963 and with a Ph.D. from Rice University in 1967. He was employed by Shell Development and Shell Oil Companies from 1967 to 1993. He joined the Rice faculty in 1993 as Professor. George received the Ralph Budd Award for the best PhD in Engineering at Rice in 1967. He was inducted into the National Academy of Engineering in 1991. He is a charter member of The Academy of Medicine, Engineering & Science of Texas. He received from the Society of Petroleum Engineering, the Lester C. Uren Award, IOR Pioneer Award, Offshore Technology Conference Heritage Award, and the Anthony F. Lucas Gold Medal. In 1999, he received the Technical Achievement Award of the Society of Core Analysis. He received the Order of the Rising Sun by the Government of Japan in 2009. In 2014, he received the Distinguished Alumni Award of Rice University.

Lianjie Huang is a Senior Scientist at Los Alamos National Laboratory. He received his PhD in Geophysics from the University of Paris 7/Institute de Physique du Globe de Paris in 1994 after obtaining his BSc. in Physics in 1985 and MSc. in Mathematics in 1989 from Peking University. His research encompasses subsurface imaging, characterization, and monitoring for geologic carbon storage and geothermal energy in addition to medical ultrasound imaging for early detection and characterization of breast cancer and prostate cancer. He has mentored 21 postdocs and 23 graduate research assistants with 15 PhD students. He has performed research for 15 projects in geologic carbon storage, 12 projects in geothermal energy, 3 projects in oil and gas exploration, and 5 projects in medical imaging. He has published more than 200 journal and proceedings papers. He recently published an edited AGU-Wiley monography titled “Geophysical Monitoring for Geologic Carbon Storage.”

Dr. Christine Ehlig-Economides is Professor and Hugh Roy and Lillie Cranz Cullen Distinguished University Chair at the University of Houston. Prior to her current position, Ehlig-Economides taught at Texas A&M University for ten years and worked twenty years for Schlumberger. While at A&M, she managed research in production and reservoir engineering in conventional and shale reservoirs and helped the petroleum engineering department to grow and evolve to a broader energy scope. Ehlig-Economides was elected to the U.S. National Academy of Engineering in 2003 and was a member of the National Academy of Science Committee on America’s Energy Future and the NRC Board on Energy and Environmental Systems (BEES). She chaired The Academies of Medicine, Engineering, and Science in Texas (TAMEST) shale task force in 2017. She currently is a Board member for QRI. She became an Honorary Member of the Society of Petroleum Engineers in 2018. Ehlig-Economides earned a Bachelor of Arts in Math-Science from Rice University, a Master of Science in chemical engineering from the University of Kansas, and a Ph.D. in petroleum engineering from Stanford University.

Anna Littlefield is the Program Manager for Carbon Capture Utilization and Sequestration for the Payne Institute for Public Policy at the Colorado School of Mines. In this role, she focuses on helping design and implement an integrated CCUS program at Mines, while also working to foster relationships between the school, government, public, NGO's and private sector. Along with her work in policy through Payne, Anna is a PhD student in the Mines Geology Department where her research focuses on the geochemical impacts of injecting CO_2 into the subsurface as well as the overlap of geotechnical considerations with regulatory and policymaking. Anna has been working in the energy industry since 2012 and most recently has worked with Oxy Low Carbon Ventures, Carbon America, and currently serves as a member of the International Standards Organization (ISO), as part of the CCS working group. Anna holds an M.S. in geology from Texas A&M University, and a B.S. in geology from Appalachian State University.

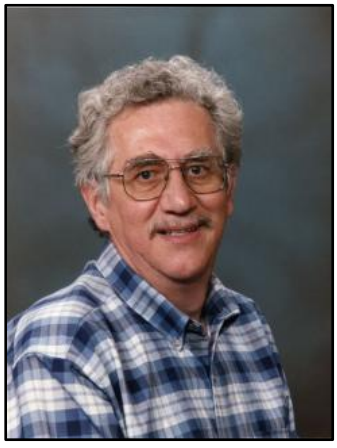
Prof. **Greg Jackson** is a faculty member in Mechanical Engineering at the Colorado School of Mines where he served as Dept. Head from 2013-2017. Before joining Mines, Jackson was a faculty member for over 15 years at the University of Maryland in Mechanical Engineering and the campus-wide Energy Research Center, for which he served as Associate Director for several years. Dr. Jackson's research group focuses on concentrating solar technologies, high-temperature energy storage, and solid-oxide electrochemical systems. Dr. Jackson has led several research projects on both reactive and inert oxide particles for high-temperature energy storage for concentrating solar power applications. He has published broadly on materials and processes for high-temperature catalysis and electrochemistry for a range of energy conversion applications. Dr. Jackson received his PhD from Cornell University after which, he worked at Precision Combustion Inc. in Connecticut before becoming an academic. He has been active in ASME and the Electrochemical Society, where he has served on the Board of Directors.



Hossein Kazemi is the Chesebro' Distinguished Professor of Petroleum Engineering at the Colorado School of Mines where he has been since 1980. He is also the Research Co-Director of the Marathon Center of Excellence for Reservoir Studies at CSM. His research interests include petroleum reservoir simulation, improved and enhanced oil recovery, transient testing in wells, and geomechanics simulation. He holds PhD and BS degrees from the University of Texas at Austin.

Kenneth B. Medlock III, Ph.D., is the James A. Baker, III, and Susan G. Baker Fellow in Energy and Resource Economics at the Baker Institute and the senior director of the Center for Energy Studies. He is also the director of the Masters of Energy Economics program, and holds adjunct professor appointments in the Department of Economics and the Department of Civil and Environmental Engineering at Rice University. Medlock is also a Distinguished Fellow at the Institute of Energy Economics, Japan, and is a member of the Advisory Board of the Payne Institute at Colorado School of Mines. In 2012-2013, Medlock held the prestigious Haydn Williams Fellowship at Curtin University in Perth, Australia. He teaches advanced courses in energy economics and supervises Ph.D. students in the energy economics field. Medlock has published numerous scholarly articles in his primary areas of interest, which include: natural gas markets, electricity markets, energy commodity price relationships, transportation, national oil company behavior, economic development and energy demand, energy use and the environment, and various energy transitions topics ranging from engineered and nature-based carbon capture to hydrogen to the economic drivers of technology adoption. He has testified multiple times on Capitol Hill on U.S. energy exports and electricity market evolution, has spoken at OPEC, and is frequently asked to speak about global and domestic energy issues.

Medlock is the past vice president for conferences for the United States Association for Energy Economics (USAEE), and previously served as vice president for academic affairs. In 2001, he won (joint with Ron Soligo) the International Association for Energy Economics Award for Best Paper of the Year in the Energy Journal. In 2011, he was given the USAEE's Senior Fellow Award, and in 2013 he accepted on behalf of the Center for Energy Studies the USAEE's Adelman-Frankel Award. In 2019, Medlock was awarded the Lifetime Achievement Award for the Advancement of the Education of Future Energy Leaders by the Abdullah Bin Hamad Al-Attiyah Foundation. He is also an active member of the American Economic Association and is an academic member of the National Petroleum Council. Medlock has served as an advisor to the U.S. Department of Energy and the California Energy Commission in their respective energy modeling efforts. Medlock received his Ph.D. in economics from Rice University in May 2000.



Russ Schnell has just retired as Deputy Director of the Global Monitoring Division of the US National Oceanic and Atmospheric Administration (NOAA). Based in Boulder, Colorado, he oversaw atmospheric measurements at 130 global locations and observatories in Barrow, Alaska; Mauna Loa, Hawaii; American Samoa; and South Pole, Antarctica. His current research activities are focused on arctic methane, greenhouse gases from fossil fuel extraction, stratospheric ozone depletion and biological ice nuclei. Dr. Schnell has ~200 scientific publications, 9 of them in Nature. Dr. Schnell was a contributing member of the Intergovernmental Panel on Climate Change (IPCC) and was recognized as a NOAA co-recipient of the Nobel Peace Prize in 2007 along with former U.S. Vice-President Al Gore".

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Robert Balch is the Director of the Petroleum Recovery Research Center located on the campus of New Mexico Tech. At the university he also holds Adjunct Professor positions in Petroleum Engineering and Geophysics and has been research advisor to more than 40 graduate students. During his 20 years at the PRRC he has been principal Investigator on a range of enhanced oil recovery projects focused on developing and applying solutions to problems at many scales using geological, geophysical, and engineering data. Dr. Balch is the Principal Investigator of the Southwest Partnerships Phase III demonstration project where 1,000,000 metric tonnes of anthropogenic CO2 is being injected for combined storage and EOR into a mature waterflood in North Texas. During the course of his work he has published more than 45 papers, is a frequent invited speaker, and has presented his research at more than 100 meetings or events. Dr. Balch has held an appointment as an Oil Conservation Commissioner for the State of New Mexico since June of 2011. He has 30+ years of energy (oil, gas, coal, power, CO2, carbon) experience in brokering, marketing, business development and strategy. He was also Executive Director of The North American Carbon Capture Storage Association (NACCSA) in Washington, DC from September 2008 until its closing April 2017. In addition, he was a founding member and officer in the Texas Carbon Capture Association (TXCCSA). Prior to FearnOil, he was the Vice President of Business Development and External Affairs for Blue Strategies-Houston. Blue Strategies/Blue Source focused on carbon monetization projects, asset development, CO2-EOR, low carbon projects, CO2 storage, policy & regulatory issues. He was recently awarded in 2015 the Royal Norwegian Order of Merit by HM King Harald V with the rank of Knight 1st Class and officer of the Order. Works in CCUS/CCS, energy infrastructure, markets and energy security were some of the positive attributes for Norway that contributed to the award.

Ryan M. Richards is a Professor of Chemistry and Materials Science at the Colorado School of Mines (Mines) and holds a joint appointment at the National Renewable Energy Laboratory (NREL) both in Golden, Colorado USA. Additionally, Dr. Richards is the Mines lead for the Mines/NREL Nexus which coordinates, facilitates and promotes all joint activities and appointments. The Richards group has made a broad range of contributions to the field of inorganic nanoscience in the areas of nanoparticle preparations, in situ spectroscopy, porous materials and catalysis, particularly as they relate to decarbonization and sustainability. Recently, the group has unveiled a new approach to carbon capture through controlling surface faceting of nanoscale materials. Prof. Richards has received numerous awards throughout his career including being selected as a Fellow of the American Chemical Society, ACS Chair of Nanoscience, and ACS International Affairs Committee. Prof. Richards received his BS from Michigan State University, MS Central Michigan University, Phd from Kansas State University (visiting scholar Boreskov Institute of Catalysis, Russia), and postdoc at the Max Planck Institute für Kohlenforschung in Muelheim, Germany.

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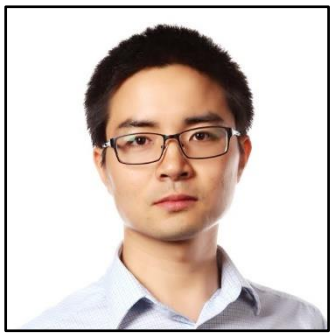
Michael E. Moore is Managing Partner of East-West Strategic Advisors located in Washington, DC. They conduct energy related strategy work on energy assets, sovereign energy security, CO2-EOR, and domestic and international policy. He is involved in much of the same areas as in previous positions with additional interest in infrastructure, cooperative development and Arctic regions. Co-founded in 2018 with Fred Eames of Hunton Andrews Kurth the Energy Advance Center working on CCUS policy. He was appointed by Energy Secretary Perry to the National Coal Council for 2018-2020 term. Prior to EWSA he was the VP of Energy Commodities and Advisory Services of FearnOil Inc., a division of Astrup-Fearnley AS. He worked on development of energy resources and commodities, CO2-EOR, CCUS, infrastructure, technology advancement and related advisory services as well as energy advocacy work in legislation/regulation at Federal and State levels.

Yu-Shu Wu is Professor of Petroleum Engineering Energi Simulation Chair at the Colorado School of Mines. He is Director of the Energy Modeling Group which aims to develop state-of-the-art reservoir modeling technology and advanced simulation tools for research, teaching, and field application in the area of subsurface energy and natural resources, and environmental science and engineering. His research interests include reservoir dynamics and simulation, mathematical modeling of flow and transport in geologic media, coupled processes of multiphase fluid flow, multicomponent chemicals transport, CO2 flooding, and heat transfer in reservoirs, fractured reservoir characterization, hydro-mechanical coupling of fluid flow and rock deformation, and well testing analysis



Dr. **Bailian Chen** is a staff scientist at Los Alamos National Laboratory. His research interests include CCUS, hydrogen storage, machine learning, optimization, and data assimilation. He holds a PhD degree in petroleum engineering from The University of Tulsa. He has published over 40 scientific journal articles/conference papers and delivered more than 30 technical presentations/invited talks at various conferences and universities. He is PI or institutional point of contact on various CO_2 transport/storage and hydrogen geologic storage projects funded through US DOE or Los Alamos National Lab internal programs. He was one of the recipients for the 2019 R&D 100 Award (widely known as the "Oscars of Invention") and R&D 100 Silver Medal for his contribution to the SimCCS. He is the current principal developer for the SimCCS – an open-source software for CCUS pipeline infrastructure decision support (https://www.simccs.lanl.gov). He serves as an associate editor for Journal of Petroleum Science & Engineering and SPE Reservoir Evaluation & Engineering.

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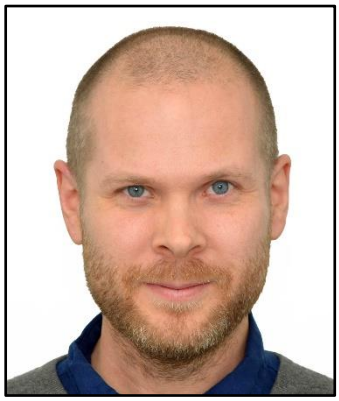
Matt Dahan, Senior Vice President – Business Development and Technology, joined Denbury in October 2010 and has over 35 years of industry experience. Prior to being named Senior Vice President, Mr. Dahan served as Denbury's Vice President – North Region, and prior to that as Denbury's Asset Manager for the Cedar Creek Anticline and as Reservoir Engineering Manager for the North Region. Before joining Denbury, Mr. Dahan served as Technical Director for Delta Hydrocarbons, BV in the Netherlands and Director of its affiliates Trefoil E&P S.L., Argentina and Delta Hydrocarbons Hungary Kft. Earlier in his career, Mr. Dahan also worked for Mobil Oil Corporation and Saudi Aramco in various engineering and supervisory roles, both domestically and internationally.

Klaus Lackner is the Founding Director of the Center for Negative Carbon Emissions (CNCE) and a professor at the School of Sustainable Engineering and the Built Environment at Arizona State University. He is a pioneer in carbon management and is the first to suggest capturing carbon dioxide from air in the context of addressing climate change. His current work includes demonstrating and improving passive methods to remove carbon dioxide from the atmosphere, integrating air capture technology with applications for using carbon dioxide, exploring safe and permanent disposal options for carbon dioxide and their certification, and identifying opportunities for automation and scaling.



Erik Rundell is assistant director general of the Norwegian Petroleum Directorate. In this position, where he is responsible for fiscal measurement, CO2 injection and coexistence with other industries, he has spent almost two of his total 10 years in the NPD. Before joining the NPD, he has been in Statoil working with cost estimation of green field petroleum projects and before that again as an instrument engineer in an E&P company. Erik holds a master's degree in Industrial Economy from University of Stavanger and a master's degree in automation from Chalmers University of Technology in Gothenburg.

Dr. **Zachary Paul Alcorn** is a Research Scientist at the Dept. of Physics and Technology at the University of Bergen in Norway. His research focuses on describing scale-dependent CO_2 displacement and storage mechanisms to bridge the gap between laboratory observations and field performance. Currently, he emphasizes upscaling CO_2 foam mobility control for CO_2 EOR and CO_2 storage applications. He also serves as the Research Director for a Norwegian Petroleum Research Center focused on the sustainable subsurface utilization of the Norwegian Continental Shelf. He has a PhD in Reservoir Physics from the University of Bergen, a Master of Science from the University of North Dakota, and a Bachelor of Science from Marietta College.

Carolyn A. Koh is the William K. Coors Distinguished Chair & Professor of Chemical and Biological Engineering and Director of the Center for Hydrate Research (annual income >$1.5M) at the Colorado School of Mines (CSM). She was the interim Department Head of Chemical & Biological Engineering (May-Aug 2019). She obtained her BSc and Ph.D. degrees from University of W. London and postdoctoral training at Cornell University. She was a Reader at King's College, London University before joining CSM. She has been visiting Professor at Cornell, Penn State and London University. She was a consultant for the Gas Research Institute in Chicago and is a Fellow of the Royal Society of Chemistry, Associate Editor of the Society for Petroleum Engineers Journal, Chair of the US DOE Methane Hydrate Advisory Committee, and served on the US Secretary of Energy Advisory Board, and many more. She was elected Chair of the Gordon Research Conference on Gas Hydrates in 2018 and was the Chair of the International Conference on Gas Hydrates (ICGH9) in 2017. She has established internationally recognized gas hydrate research programs over the last two decades at King's College, University of London and the Colorado School of Mines. She has received several awards, including the Young Scientist Award of the British Association for Crystal Growth, ConocoPhillips Faculty Award (2010-2012), CSM Young Faculty Research Excellence Award (2012), Dean's Award (2016), Distinguished Lecturer Award (2021). Also recently, IChemE Guggenheim Medal 2021. Guggenheim Medal – IChemE. Yeram S. Touloukian Award 2021. Yeram S. Touloukian Award – ASME. She has over 200 publications.

James Wilson is Distinguished University Professor Emeritus in the Department of Mechanical and Materials Engineering at the University of Denver. Dr. Wilson's research group designed, built and flew sampling inlets and instruments to characterize atmospheric aerosol particles in the diameter range from 4 to 1000 nm. These instruments have been operated on over 300 research flights on NASA, NOAA and NCAR planes from 72 S to 90 N and from the surface to above 20 km altitude. They have been deployed to study air quality in Houston and pollution transported from east Asia and the eastern US. Deployments in the upper troposphere and lower stratosphere studied the impact of volcanic eruptions, the role of particulate matter in stratospheric ozone depletion, high-altitude clouds, aircraft and rocket emissions, and aerosol -cloud interactions. These instruments have found a new homes in the NASA Langley Aerosol Research Group and NOAA's Chemical Sciences Laboratory in Boulder, CO.

C. Michael McGuirk is an assistant professor in the department of chemistry and materials science programs at Colorado School of Mines. At Mines, Mike runs a research program focused on the atom-up development of functional materials for diverse applications, such as hydrogen storage, petrochemical purification, and carbon capture. Mike was a 2021 recipient of the NSF CAREER Award."

Björn Paulsson is the CEO & President of Paulsson, Inc. He has a Fil. Kand. In Geology and Geophysics from U. of Gothenburg (1976) and a Ph.D. in Seismology and Rock Mechanics from UC Berkeley (1983). Dr. Paulsson has published more than 60 papers and has received 9 patents in the field of borehole seismology and borehole instruments. He invented borehole seismic sources and receivers and performed world record borehole seismic surveys in the energy industry.

His professional work and accomplishments include:

1. First long-term time-lapse monitoring of an Underground Natural Gas Storage Field (2022).
2. First development of a Single Well Seismic System with a seismic source and an optical 3C receiver array in the same borehole (2020).
3. First time-lapse monitoring of CO2 injected into a fractured carbonate oil reservoir (2016)
4. First development of an all-optical Fiber Optic Seismic Vector Sensor (FOSVS) (2013).
5. First large scale 3D VSP survey in a large oil field in Abu Dhabi, UAE (2010).
6. First high-resolution survey of the San Andreas Fault identifying a three-fault system (2007).
7. First development of a large 400 level 3C borehole seismic array funded by DOE (2006).
8. First 3D VSP high-resolution imaging of an Alaska Methane Hydrate Reservoir (2005).
9. First multi-well 3D VSP to image thin reservoir beds on the North Slope (2002).
10. First paper on borehole Fiber Optic sensors for reservoir characterization (2000).
11. First multi (8) well 3D VSP survey of a mature California oil reservoir (1998).
12. First acquisition of borehole seismic data with a fiber optic hydrophone array (1997).
13. First Cross Well survey with a downhole seismic source imaging an offset saltdome (1997).
14. First ever Reverse VSP working with MIT at their Michigan test site (1997)
15. First time lapse tomographic survey in a Canadian Athabascan tar sand reservoir (1994).
16. First time lapse cross well seismic tomographic survey in an oil field in California (1990).
17. First cross well seismic tomographic survey in an oil field in Indonesia (1990).
18. First development of an effective non-destructive downhole seismic source (1988).
19. First time lapse tomographic survey of an oil field stimulated by steam injection (1985).
20. First papers on a cross-hole ultrasonic monitoring of a granitic rockmass. (1979, 1980)
21. First time lapse tomographic survey of a heated and de-watered fractured rock mass (1978-80).
22. First long-term monitoring survey of a rock mass heated by simulated nuclear waste (1977-80).

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Josh Schaidle is the director of the Chemical Catalysis for Bioenergy (ChemCatBio) Consortium and has been recognized as a Distinguished Member of the Research Staff at the National Renewable Energy Laboratory (NREL). He also serves as the Chief of Staff for the Bioenergy Science and Technology Directorate and NREL's program manager for the Office of Fossil Energy and Carbon Management. Josh received his B.S. in Chemical Engineering from the University of California-Santa Barbara in 2006, his Ph.D. in Chemical Engineering from the University of Michigan in 2011, with a concentration in environmental sustainability, and his Distinguished Leadership Certificate from the Ross Business School at the University of Michigan in 2020. He seeks to build and empower diverse, multi-disciplinary teams to accelerate technology development to address climate change. His dream is to create a future in which the quality of life for each and every person is no longer a compromise between sustainability and affordability.

Luis Zerpa is an Associate Professor at the Petroleum Engineering Department of the Colorado School of Mines, and Director of the Center for Rock and Fluid Multiphysics. Luis received his degrees in Mechanical Engineering (BS and MS) from the University of Zulia (Venezuela) and PhD in Petroleum Engineering from the Colorado School of Mines. Luis previous experience working in industry includes the design of an industrial offshore chemical flooding pilot project. His research combines experimental and modeling evaluation of multiphysical properties of rocks, fluids, and their interactions with applications to petroleum reservoir engineering, geothermal and CCUS.

Joey Minervini is a Senior Consultant in Carbon Storage Technology with the Global CCS Institute, a not-for-profit, international climate change think tank whose mission is to accelerate the global deployment of CCS. The Institute is based in Melbourne, Australia with offices in the US, UK, Belgium, Abu Dhabi, China, and Japan. Joey is part of the Institute's commercial team which comprises experts across the full CCS value chain including geoscience, engineering, economics, and legal and regulatory disciplines. Joey contributes to Institute thought leadership and provides CCS consultancy services. Prior to joining the Institute in 2021, Joey spent more than 15 years as a geoscientist at ExxonMobil, specializing in subsurface analysis and characterization. He has developed and led regional- to prospect-scale exploration projects in basins across the globe. Joey's background includes academic and professional work in stratigraphy, sedimentology, basin analysis and tectonics. His experience also includes resource assessment, geologic risk analysis, and business development. Joey earned his M.S. degree in Geology from the University of Pittsburgh and is a member of the American Association of Petroleum Geologists.

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Jessica Raines has spent a large portion of her career working in and around the carbon capture, utilization and storage (CCUS) industry. She is currently the Oilfield Services Global Discipline Lead of CCUS for Baker Hughes, a market-leading energy technology company with over 58,000 employees and a global footprint with a presence in over 120 countries. Jessica develops the global CCUS approach for the product company and she works to enable the development of new products and services targeted at improving the long-term viability of this carbon-reduction strategy and meet their net-zero goals. Before accepting her current role, Ms. Raines worked within her product company to bring geochemical R&D products and services into commercialization as well as spending a brief stent in operations. Prior to that, she held positions within the environmental engineering and government spaces, including industrial environment compliance enablement and as a geologist at the US Geological Survey.
Jessica is a technical and subject matter expert for a range of topics, including carbon dioxide (CO2) storage, risk assessment and long-term liability, sequestration monitoring technologies, Underground Injection Control (UIC) permitting and global regulatory frameworks. Through her global network, she is engaged with over 110 projects of various degrees of development, 63 of which are in the United States. These projects entail the drilling and completion of stratigraphic test wells, injection well design, CO2 storage resource assessment, measurement, monitoring and verification (MMV) plan development, regulatory compliance reporting, risk advisory services and project feasibility analysis. Jessica has a diverse academic background with bachelor's degrees in environmental geology and physical anthropology from Georgia State University as well as a master's degree in geology from the same institution. She has published on the subject of CCUS and has lectured globally on a range of CCUS-related issues. She also serves as the SPE CCS Technical Section Chair for 2022/2023.

Robert Braun is Associate Professor of Mechanical Engineering at Colorado School of Mines. He has a multi-disciplinary background in mechanical and chemical engineering and his research focuses on multi-scale modeling, ranging from device-level numerical simulation of transport phenomena and chemical processes to systems-level studies of advanced energy conversion systems. His primary research interests are focused on applications involving thermochemical and electrochemical systems. Dr. Braun received B.S. and M.S. degrees from Marquette University and a Ph.D. from the University of Wisconsin – Madison.

Ian Lange is Director of the Mineral and Energy Economics graduate program the Colorado School of Mines. Previous appointments were as Senior Economist for Energy at the Council of Economic Advisers, Associate Professor at the University of Stirling and a post-doctoral fellow in the National Center for Environmental Economics at the Environmental Protection Agency as well as short stints as an ORISE Fellow at the Department of Energy and a Lone Mountain Fellow at the Property and Environment Research Center.