

ANNUAL CLIMATE TECH SYMPOSIUM

Rising industry leaders
present exciting climate
solutions.

FRIDAY, DECEMBER 3, 2021
9:00AM-4:00PM PACIFIC

Spieker Forum, 6th Floor of Chou Hall
Haas School of Business, UC Berkeley

This is an amazing opportunity
to learn about innovative
climate technologies.





The First Climate Tech Accelerator

C2M's interdisciplinary graduate student teams work with entrepreneurs seeking to commercialize innovative climate tech solutions. Over 15 weeks, each team and their subject matter experts spend nearly 1,000 hours assessing these leading-edge technologies and investigating a wide range of market opportunities. At today's symposium, these teams will present their findings and recommendations, followed by audience Q&A.

Please visit our website for more information on the Cleantech to Market Program:

haas.berkeley.edu/c2m/

Welcome, we hope you enjoy this event!

Agenda

- 9:00am-9:45am: Breakfast/Networking/Check-in
- 9:45am-10:15am: Welcome Remarks: **Brian Steel**, Director, C2M
Ann Harrison, Dean, Berkeley Haas
- 10:15am-10:45am: **RenewC02**
- 10:45am-11:15am: **Anthro Energy**
- 11:15am-11:30am: Break/Networking
- 11:30am-11:45am: Special Presentation: **Liam Berryman**, CEO,
Nelumbo (C2M 2016)
- 11:45am-12:00pm: Keynote Speaker: **Dr. James Zahler**, Associate
Director of Technology-to-Market, ARPA-E/DOE
- 12:00pm-12:45pm: Lunch/Networking
- 12:45pm-1:00pm: Special Presentation: **Miguel Sierra Aznar**, CEO,
Noble Thermodynamics (C2M 2019)
- 1:00pm-1:30pm: **Dioxide Materials**
- 1:30pm-2:00pm: **Buzz Solutions**
- 2:00pm-2:30pm: **Benchmark Labs**
- 2:30pm-2:45pm: Special Presentation: **Kristin Taylor**, CEO,
Radical Plastics (C2M 2020)
- 2:45pm-3:00pm: Presentation of Hasler Cleantech to Market
Award/Closing Remarks: **Brian Steel**, Director, C2M
Bill Shelander, Instructor, C2M
- 3:00pm-4:00pm: Reception/Networking

Dynamic Partnerships

Cleantech to Market (C2M) is a partnership between graduate students, entrepreneurs, researchers, and industry professionals to help accelerate the commercialization of emerging climate tech. In the process, C2M also develops the next generation of innovative climate tech leaders.

Entrepreneurs & Researchers

C2M first identifies promising cleantech solutions from (1) existing startups, (2) accelerators & incubators such as Cyclotron Road and Cleantech Open, (3) government-sponsored programs, including those funded by the U.S. Department of Energy and the California Energy Commission, and (4) top-tier universities such as UC Berkeley, Stanford, Caltech, Princeton, and MIT.

Graduate Students

C2M then handpicks graduate students from over 20 UC Berkeley disciplines, including business, engineering, science, law, policy, and the Energy and Resources Group. C2M strategically matches their academic and work experience with each project, forming teams of four to six students.

Cleantech Professionals

C2M supports the teams with leading climate tech professionals who bring deep subject matter expertise (e.g., batteries and related components and controls, electric grid operations, economics, early-stage venture). They help guide the students as speakers, mentors, and contacts.

Innovation in Action!

The result is 1,000 hours of technology evaluation and market assessment for each project. Students experience the rewards and challenges of taking climate tech innovations to market; entrepreneurs and researchers gain valuable market feedback on their technologies and business plans; and professionals engage with fresh talent and new ideas.

Thank You Sponsors & Partners



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Resourceful Paths



cyclotronroad



CalSEED



C2M Faculty



Brian Steel is Director of the Cleantech to Market program to which he brings 35 years of business innovation and leadership experience. He is a repeat member of the Haas “Club of 6” for teaching excellence. Brian is a member of the investment advisory board of the Commonwealth Energy Fund and was a founding member of the external advisory board of the Innovation Incubator (a Wells Fargo/NREL joint venture).

Brian has served as an advisor to the Department of Energy, working on both renewable energy financing and solar initiatives and was Senior Advisor to the Renewable Energy Trust and an advisor to the Berkeley Startup Cluster. Prior to joining the UC Berkeley faculty, Brian was Vice President of Corporate Strategy & Development for PG&E Corporation, where he led the energy industry’s first tax-equity solar project financing by an investor-owned utility, investing \$400 million in nearly \$1 billion of photovoltaic assets from 2010-2011.

Brian is also a co-founder of Hypatia Project, a software engineering firm that builds advanced technologies for public benefit missions around the globe, including the U.S. Joint Artificial Intelligence Center. Prior roles include Chairman, International, Pandora Media – the world’s leading Internet radio company; President, International, Overture Services – building a billion-dollar division of Yahoo! with operations in 20 countries; President and CEO, Idealab Silicon Valley and Managing Director of Idealab; and President and COO, On Command. Previously, Brian was Senior Vice President and co-head of the Real Estate Merchant Banking Group at Shearson Lehman Brothers. He has served on the boards of more than 20 early-stage technology companies, several of which went public, and many of which had successful acquisition exits. His separate private investments include Back to the Roots (Haas-founded startup), Bay Area Panera restaurants, Birdies, LiveOps, and Powerset (sold to Microsoft). Brian holds a BA magna cum laude in Economics from Duke University, where he was an Angier B. Duke Scholar.

C2M Faculty



Bill Shelander joined the C2M faculty in 2016 after serving as an advisor and mentor to the program since 2010. Bill brings hands-on proficiency at the earliest stages of emerging technologies and venture funding. He is also teaching the Environmental Entrepreneurship and Innovation program at Stanford University's School of Civil and Environmental Engineering.

Bill was a commercialization expert for Berkeley Lab (2010-2015), working with researchers in fundamental energy science to utilize discoveries in new business activities. He helped create and obtain external funding for dozens of startups involving diverse technologies (from industrial-scale microbiology and DNA diagnostics to thin film oxides and high-performance supercomputers).

Previously, Bill served on a White House Office of Science & Technology Policy panel to improve technology transfer of basic research. Between 1986 and 2007, he was a managing director of venture capital funds from the U.S., Japan, Taiwan and China. He has served on the boards of several NASDAQ-listed companies. Bill is an active entrepreneur who has co-founded several successful "hard" technology companies, including Mango Materials, whose process converts methane into polyhydroxyalkanoate (PHA) a multi-application biodegradable polymer, which is recognized as one of the "Global Cleantech 100" for 2021, and Anven Biosciences, which has created a fundamentally new approach to rapidly developing novel and more effective therapeutics involving the creation of highly specific bio-functional molecules. Bill holds an MBA from Stanford University, an MS Engineering from West Virginia College of Graduate Studies, and a BS Systems Engineering from the Georgia Institute of Technology.



Beverly Alexander is the lead coach and mentor for the Cleantech to Market program, for which she was the founding director, beginning in 2009. She has been involved in energy and environmental innovation for almost 30 years. Bev serves as an advisor to the Berkeley Energy & Resources Collaborative and received the 2013 Berkeley Haas Best Case award for a cleantech commercialization case study.

Bev was also a member of the Haas “Club of 6” for excellence in teaching and served on UC Berkeley’s Innovation Council and new Environmental Resilience Accelerator.

As a Senior Vice-President at Pacific Gas & Electric Company, she was responsible for customer services and the largest energy efficiency, solar, and demand response programs in the United States. Those programs moved \$1.2 billion into the California economy and won over 75 awards, including the United States Department of Energy’s Energy Star Sustained Excellence award. Bev also held Director, Chief Counsel, and Vice President positions in generation, transmission, distribution, and customer services, with a focus on leadership development and strategic planning. Before PG&E, Bev specialized in emerging environmental law and policy. The National Law Journal recognized her as one of the top 40 attorneys under the age of 40 in the United States for her pioneering work. After PG&E, Bev consulted on clean energy solutions, including sustainable communities. Bev received her BA in Environmental Studies from UC Santa Cruz and her JD from UC Berkeley, where she was Editor-in-Chief of Ecology Law Quarterly and clerked on the United States Ninth Circuit Court of Appeals.

Welcome Remarks



Ann Harrison became the 15th dean of the Haas School of Business on Jan. 1, 2019. A renowned economist, she has dedicated her career to creating inclusive and sustainable policies in development economics, international trade, and global labor markets.

Harrison has deep Berkeley roots. She earned her bachelor's degree from UC Berkeley with a double major in economics and history. She also served as a professor of Berkeley's Department of Agricultural and Resource Economics from 2001 to 2011. Harrison is one of the most highly-cited scholars globally on foreign investment and multinational firms. She is the author of dozens of journal articles and the editor of three books, including *Globalization and Poverty* and *The Factory-Free Economy: Outsourcing, Servitization, and the Future of Industry*. In 2017, Harrison and her co-authors were awarded the prestigious Sun Yefang Prize by the Chinese Academy of Social Sciences. The prize, given every two years, is considered one of China's most prestigious honors in economics. As director of development policy at the World Bank, Harrison reformed its process for allocating research funds and oversaw the institution's flagship publications. She convinced the World Bank's president to release all historical records on project loans, a milestone in increasing transparency. Harrison has been interviewed about global trade policies and manufacturing by top publications including Bloomberg, The New York Times, and The Los Angeles Times.

In addition to Berkeley and Wharton, Harrison has held positions at Columbia Business School, the Kennedy School of Government at Harvard University, and the University of Paris. She has lectured at most major U.S. universities and in India, China, Latin America, Europe, the Philippines, and North Africa. Harrison earned her PhD in economics from Princeton University. She also holds a DEUG (diplôme d'études universitaires générales) from the University of Paris. Born in France, she is a dual citizen of the U.S. and France.

Keynote Speaker



Dr. James Zahler currently serves as the Associate Director for Technology-to-Market at the Advanced Research Projects Agency-Energy (ARPA-E) where he is responsible for oversight of all Technology-to-Market activities. He is also responsible for advising teams within the Full-Spectrum Optimized Conversion and Utilization of Sunlight (FOCUS) and OPEN portfolios, which include photovoltaic (PV), concentrated solar power (CSP), and heat engine technologies.

Zahler also supports performers in the Micro-Scale Optimized Solar-Cell Arrays with Integrated Concentration (MOSAIC) portfolio, which is designed to develop novel PV and optics technologies for concentrated photovoltaics (CPV). Zahler joined ARPA-E from GT Advanced Technologies in Merrimack, NH. As the Senior Director of Product Technology, he managed research and application development activities for industrial sapphire materials and growth equipment. These activities included leadership in equipment design, process development, and materials characterization for projects that supported more than \$250 million in equipment sales. Zahler also played a key role in adapting and scaling-up ASF™ technology in support of GT's contract with a Fortune 50 consumer electronics manufacturer.

Prior to GT Advanced Technologies, Zahler was a Cell Technology Manager at BP Solar, co-managing its advanced solar cell technology development activities. He also supported BP Alternative Energy Ventures by assessing commercial and strategic value of clean-tech opportunities, including the spinout of a BP-supported technology through co-investment with a Silicon Valley venture capital firm. Zahler started his career co-founding Aonex Technologies to develop and commercialize his thesis technology. As VP of Technology, he led an effort that resulted in development of a novel substrate technology for III-nitride semiconductor growth and processing that was acquired by a major microelectronics manufacturer. Zahler earned both a PhD in Chemical Engineering and a MS in Applied Physics from the California Institute of Technology. He holds a BS in Chemical Engineering from Texas A&M University.

2021 Cohort

RenewC02

10:15am-10:45am

Carbon-negative electrochemical process that converts CO₂ to plastic precursors and other molecules, replacing fossil fuel-derived feedstock.

Website

renewco2.com/

Founder

Karin Calviho, CTO

C2M Student Team

Angela Lewis, FTMBA

Brooke Munroe, FTMBA

Jessica Brownell, FTMBA

Michelle Reid, PhD, Molecular and Cell Biology, Biochemistry, Biophysics, and Structural Biology

Sneha Solanki, EWMBA

Thomas Van Hentenryck, Masters Public Policy



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2021 Cohort

Anthro Energy

10:45am-11:15am

Flexible, deformable, impact-resistant batteries, using advanced, non-flammable ion-conducting polymer electrolyte to enable next-generation applications.

Website

anthroenergy.com/

Founder

David Mackanic, CEO

C2M Student Team

Alan Huynh, FTMBA

Allen Churchill, FTMBA

Bartlett Jackson, FTMBA

David Brown, PhD Chemical Engineering

Ryota Soshino, FTMBA

Sharun Kumar, FTMBA



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2021 Cohort

Dioxide Materials

1:00pm-1:30pm

Designs, builds, and sells electrolyzers for conversion of CO₂ into feedstocks to produce primary fuels and chemicals.

Website

dioxidematerials.com/

Founder

Richard Ni, Manager

C2M Student Team

Alex Hamilton, FTMBA

Ethan Curling, PhD Chemistry

Grace Brittan, FTMBA

Ismail Aberki, FTMBA

Nori Terashima, FTMBA

Zach Hoffman, PhD, Chemical and Biomolecular Engineering



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2021 Cohort

Buzz Solutions

1:30pm-2:00pm

AI-powered software platform for automated visual inspections, providing anomaly detection and data analysis tools for energy infrastructure and antiquated industries.

Website

buzzsolutions.co/

Founder

Kaitlyn Alberoti, CEO

C2M Student Team

Chelsea Boyle, MBA

Dinara Ermakova, PhD Nuclear Engineering

Buzz Solutions

Federico Cueva Salas, FTMBA

Han Le, PhD Chemistry

Luis Felipe Gonzalez, FTMBA/Master of Mechanical Engineering

Preston Suan, FTMBA

Sean Mandell, FTMBA

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2021 Cohort

Benchmark Labs

2:00pm-2:30pm

High-resolution, asset-specific environmental forecasts, applying nonlinear machine learning to public, private, and in-situ weather data from IoT sensors.

Website

benchmarklabs.com/home

Founder

Carlos Gaitan, CTO

C2M Student Team

Eric Edelstein, FTMBA

Grant Ligon, EWBMA

Rafael Alberto Grillo Avila, JD Law/PhD
Jurisprudence & Social Policy

Sam Bauer, FTMBA

Shiva Patel, FTMBA

Thomas Fantis, FTMBA



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