

Impulse, volume 11
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Raymond Weitekamp's first product; Mateo Jaramillo on his time at Cyclotron Road; new thermionics insights; and much more

Friends and colleagues,

What do you want to be when you grow up? Whether you're 6 or 60, that question can cause some anxiety. Growing up, Raymond Weitekamp never really questioned it. He'd be a chemist. And he is. But he's also a CEO, a musician, and an (accidental) inventor. The route he's taken, which we've documented [in this profile and video](#), has been full of surprises.

Much like Weitekamp, Mateo Jaramillo came to Cyclotron Road to explore a new beginning. We're thrilled that Jaramillo, a former Tesla VP, has [shared his takeaways](#) from a six-month stint as our first executive-in-residence.

Find more exciting Cyclotron Road news below, including [the backstory](#) on a paper published in *Applied Physics Letters* that could pave the way for better thermionic energy converters.

Onward,

P.S. We're getting a little emotional around here, watching the calendar tick closer to cohort 2's graduation and preparing to announce the esteemed group of innovators who will comprise Cohort 4 in the coming weeks. Stay tuned!

Cohort Feature

Catalyzing an entrepreneur: Raymond Weitekamp is manufacturing an additive future



It's amazing the difference two years can make. When Raymond Weitekamp entered Cyclotron Road in our inaugural cohort, he was thinking about becoming a professor. Today, he's helming a startup that is primed to revolutionize the 3D printing industry. And it all traces back to a few errant molecules—and his interest in the "alchemic magic" involved in making something completely new.

[Read the full profile on *Phase Change*](#)

Program News

Uphill, but worth it: my Cyclotron Road story

[by Mateo Jaramillo](#)

Last fall, we launched our executive-in-residence program with the goal of

—providing both with a mutual sounding board for their ideas and market strategies in launching new hard tech ventures. We were fortunate enough to convince Mateo Jaramillo, former VP of Products and Programs at Tesla Energy, to pilot the program with us. [In this essay](#), Jaramillo looks back on his time as EIR, and the career transition that it ushered him through.



Cohort News

Collaboration sheds new light on thermionics

Berkeley Lab scientists developed Warp software to simulate and study particle accelerators. But after using it to visualize the movement of electrons inside thermionic energy converters, Ian Lim, a summer intern with Spark Thermionics, [landed on some surprising results](#).



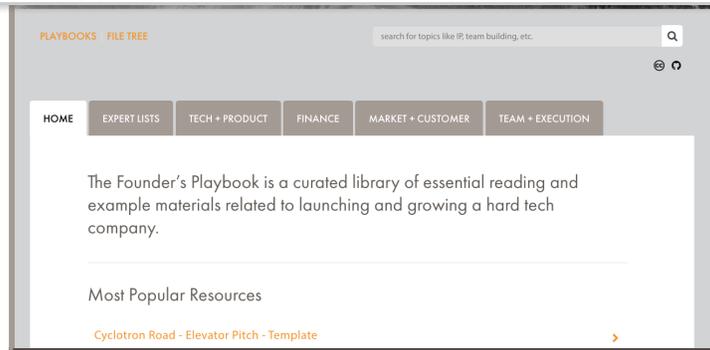
Recently published in the journal *Applied Physics Letters*, the findings could advance this type of clean energy technology—which until recently had been largely abandoned but is seeing a modern resurgence led by startups like Spark.

Program News

Our *Founder's Playbook* beta site is live: check it out for the best reading materials in hard tech

Following many months of work, we're excited to release the beta version

The Playbook is a curated, searchable library of essential reading and example materials related to launching and growing a hard tech company, and is meant to be a resource for anyone looking for advice in that endeavor. [Check it out](#) and let us know what you think!



Program News

HBR on Opus 12, Cyclotron Road, and the hard road for hard tech in Silicon Valley

For *Harvard Business Review*, Greg Satell reported on why some groundbreaking technologies, like Opus 12's carbon recycling catalysts and reactors, are a bad fit for Silicon Valley—[but a great fit for Cyclotron Road](#).



In describing why he founded Cyclotron Road, Ilan Gur told Satell: “Compared to consumer markets, industrial technologies need to check off a lot more boxes... For deeper technologies, you can’t always innovate at a venture capital cadence, where you have to get big super fast.”

Quanta ...

Cohort news ...

Opus12 chief science officer (and cohort 1 alumna) Etosha Cave is drawing a lot of attention with [a feature in Ozy](#), a spot on the [Grist 50 list](#), and inclusion in [Vanity Fair's fantastic list](#) of 26 women of color diversifying entrepreneurship...

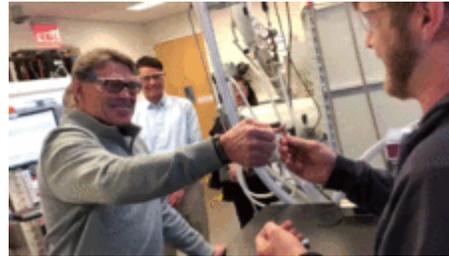
Program news ...

Ilan Gur and Brenna Teigler [spoke on a panel](#) at the AAAS annual meeting in

Pittsburgh, PA ...

In case you missed it ...

Alumnus Raymond Weitekamp had a wishbone duel with Rick Perry during the [DoE Secretary's visit](#) last month...



What we're reading ...

Why did British astronomer Margaret Burbidge [reject a prestigious award](#) in 1971?... [Inc. magazine](#) asked our founder Ilan Gur how America can win back its manufacturing prowess... Nature delved into [how scientists seek impact](#) (often by leaving academia)... Danielle Applestone turned down a coveted gig at Tesla to build a [different kind of machine](#)... Managing director Matt Price spoke to GreenBiz about [Cyclotron Road's mission](#)

Congratulations ...

... to the [newly-minted second cohort](#) at Innovations Crossroads! Based at Oak Ridge National Laboratory, Innovation Crossroads is one of two other entrepreneurial fellowship programs that, based on our model, have been launched at national labs and funded by the DoE's Advanced Manufacturing Office. (Argonne National Laboratory runs a similar program called Chain Reaction Innovations.)

Calendar

Catch up with us at an upcoming event!

[Resources for Energy Startups](#) April 18—San Francisco, CA

Moderated by GreenBiz senior writer Katie Fehrenbacher, this Young Professionals in Energy panel will take a critical look at support systems for energy startups. Panelists: Wade Bitaraf, founder of Plug and Play Tech Center's energy and sustainability track; Joshua Posamentier, managing partner at Congruent Ventures; Cyclotron Road managing director Sebastien Lounis; and Rick Wilmer, former CEO of Leyden Energy.

[EarthX E-Capital Summit](#) April 19—Dallas, TX

EarthX (formerly Earthday Texas). [The panel](#) begins at 2:15pm on April 19.

[Open House Happy Hour](#) May 17—The Daily Pint, Berkeley, CA

Join the Cyclotron Road team and innovators at the Daily Pint (1828 Euclid Ave, Berkeley, CA) for an informal Happy Hour on Thursday, May 17th from 5:00pm to 7:00pm. Come meet our team and current fellows and learn more about their experience in the program.

[VERGE Hawaii: Asia Pacific Clean Energy Summit](#) June 12-14—Honolulu, HI

VERGE Hawaii is the platform for the systems-level thinking necessary to build the clean economy. Join more than 800 stakeholders—from corporations, government, military, utilities, NGOs and solution providers—to create new partnerships and explore emerging technologies and trends that will increase economic and community resilience—in Hawaii and worldwide.

[VERGE Oakland](#) October 16-18—Oakland, CA

Save the date for VERGE Oakland: Where technology meets sustainability. VERGE 18 Oakland will be held at the Oakland Convention Center.

Get Involved

Work with one of our project teams

Three of our project teams are looking to expand their rosters considerably.

- Feasible, which is developing acoustic-based diagnostics to improve battery safety and performance, [is hiring](#) a director of business development and a mechanical hardware engineer.
- Nelumbo [is hiring](#) two engineers, an electrocorrosion research scientist, and a lab technician to help it develop advanced materials in the heating and cooling industry.
- Sepion [is hiring](#) a product development manager, a synthetic chemist and an office manager as it moves into a new lab and grows its team to develop advanced membranes for batteries.

validated high-throughput data collection, [is hiring](#) a research associate to assist the team with executing laboratory protocols and process development.

- Treau, which is also serving the heating and cooling markets through a new low-emissions, high-efficiency approach to residential systems, [is hiring](#) a head of product, a business development lead, a manufacturing engineer and a materials engineer/scientist.

Join a webinar to learn more about Cyclotron Road

Cyclotron Road fellows are embedded in the Berkeley research ecosystem for two years, where we provide them with funding, access to Lawrence Berkeley National Lab and UC Berkeley, and a program of intensive mentorship, education, and networking.

Want to learn more? [Sign up for an informational webinar here.](#) Upcoming Webinar dates:

- Wednesday, May 16th at 1pm PT
- Wednesday, June 20th, at 1pm PT

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