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Tresa Pollock is the first woman to win the prestigious Acta Materialia Gold Medal for metallurgists

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Tresa Pollock, interim dean of UC Santa Barbara’s College of Engineering, has been recognized by her peers with the [2023 Acta Materialia Gold Medal](#), a top honor bestowed in recognition of the significant and lasting impact of her materials research and leadership in the field. Pollock, the Alcoa Distinguished Professor of Materials, is the first woman in the 50-year history of the medal to receive the award from Acta Materialia, Inc., a non-profit organization that represents 36 professional societies and publishes the preeminent materials journals.

“I am humbled and honored to be recognized by my colleagues,” said Pollock. “This award is the result of numerous successful collaborative research programs and a true reflection of the excellent graduate students, postdoctoral scholars, professional colleagues and staff that I have worked with around the world.”

Pollock’s research interests include the mechanical and environmental performance of materials in extreme environments, unique high-temperature materials

processing paths, ultrafast laser-material interactions, alloy and coating designs, and 3D materials characterization. Pollock and her research group invented an innovative in-situ tomography platform, called the TriBeam. The instrument enables 3D imaging of materials and makes it possible to acquire a unique set of multimodal information about materials chemistry and structure, which is then turned into 3D data sets.

Pollock received the Acta Materialia Gold Medal during the 152nd annual meeting of The Minerals, Metals & Materials Society (TMS). When the speaker announced that Pollock was the first woman ever to receive the award, UCSB materials professor Carlos Levi, who was in the audience, said that the crowd erupted in standing applause. Levi, who has collaborated with Pollock for more than 20 years, described her as a pillar in their field — not just as a world-class leading scientist, but also as a generous colleague and collaborator, mentor and effective champion of diversity and excellence.

“I cannot think of a more deserving recipient of what I consider the highest international award for a metallurgist,” said Levi. “Tresa is the world’s preeminent superalloy expert, so she is a trailblazer in materials science and engineering. More broadly, she has impacted the profession as a leader at the college, university, national and international levels.”

Pollock played an integral leadership role in the development and advancement of the U.S. Materials Genome Initiative (MGI), the federal multi-agency initiative aimed at discovering, manufacturing and deploying advanced materials twice as fast and at a fraction of the cost, compared to traditional methods. The initiative resulted in new policies, resources and infrastructure to support the adoption of methods for accelerating materials development. In addition, in 2005 she became the first woman to serve as president of TMS, a professional society founded in 1871. Pollock served as chair of UCSB’s materials department from 2011–2017, and was appointed as the interim dean of the College of Engineering in September 2021.

In her illustrious career, Pollock has received a number of prestigious awards and recognitions, blazing trails along the way. She has been elected to the National Academy of Engineering, selected for a Department of Defense Vannevar Bush Faculty Fellowship, the TMS Morris Cohen Distinguished Achievement Award, the Institute of Metals’ Robert Franklin Mehl Award, and an honorary membership in the Société Française de Métallurgie et de Matériaux. She was selected as an honorary member of the American Institute of Mining, Metallurgical, and Petroleum Engineers

(AIME) in 2018, becoming only the second woman to receive the prestigious honor in that organization's 147-year history, and the first woman so nominated by TMS. She was cited for "extraordinary contributions to the metallurgical field as an inspiring educator, a creative technologist, an exceptional colleague, and a visionary leader of the TMS community."

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