



DINESH BETTADAPUR NAMED CEO OF IRRESISTIBLE MATERIALS

Bettadapur to drive the commercialization and adoption of company's innovative EUV photoresist material platform

BIRMINGHAM, United Kingdom, February 18, 2025—Irresistible Materials, Ltd. (IM), a leader in the development of novel resist materials for extreme ultraviolet (EUV) lithography, announces the appointment of Dinesh R. Bettadapur as its new chief executive officer (CEO) and board director. With a distinguished career in the semiconductor industry, Bettadapur brings a wealth of business experience and strategic vision from his work at several industry tech leaders. In his new role, Bettadapur will lead IM's business strategy and commercial engagements to propel IM into its next phase of growth and innovation. Specifically, he will drive the adoption of its innovative EUV photoresist platform, called Multi-Trigger Resist (MTR™), across the industry's leading integrated device manufacturers (IDMs) and foundries.

IM's MTR platform has been designed from the ground up specifically for EUV lithography, and addresses the limitations of legacy resist materials. It is up to two times faster than competing resists, which has the potential to result in annual cost-of-ownership (CoO) savings of approximately US\$10-15 million per EUV scanner operating in a production fab.

Building on a Strong Foundation

IM is a spin off from the [University of Birmingham](#) (UK). Since 2010, IM has grown its partner network and developed an extensive portfolio covering innovative resists for EUV, electron beam (e-beam) and hard-mask materials. Today, it is an innovative EUV resist company with its MTR platform, which is an IP protected, novel photoresist approach that has been designed specifically to enable low-NA and high-NA EUV lithography. According to IM, based on a combination of internal analysis and industry research data, the global EUV photoresist market is expected to grow at a substantial compound annual growth rate (CAGR) of over 20% and exceed US\$1 billion by the end of the decade.

A Visionary Leader for the Future

Bettadapur has an impressive track record of success within the semiconductor industry, having previously held leadership roles at ASML, Intel, and Lam Research, as well as multiple Silicon Valley startups where he enabled significant business growth leading to three successful exits. He has built long-term business relationships and partnerships with leading semiconductor device manufacturers, foundries, equipment vendors, and fabless chip companies. With over 20 years of executive management experience in semiconductors, he has successfully transitioned across several technology domains in the semiconductor ecosystem (chip design, digital twin, IP licensing, lithography, photomask technologies, process R&D, software, and services) spanning multiple markets (automotive, computing, display, IOT, memory, power devices, and 5G). Bettadapur earned a bachelor's degree in electrical engineering from Bangalore University, India and a master's degree in electrical engineering from Virginia Tech, USA.



EUV Photoresist Innovation

In EUV lithography, traditional photoresists like chemically amplified resist (CAR) and metal oxide resist (MOR) cannot fully meet the requirements for higher resolution, low defectivity, and improved throughput. The need for specialized EUV photoresists will only become greater as chip manufacturers push the limits of EUV lithography to further reduce the size of chip feature sizes. IM's MTR technology addresses these challenges with a patented small-molecule design—10 times smaller than conventional polymers—enabling superior resolution and pattern fidelity. Its Multi-Trigger chemistry enhances chemical gradients, reducing blurring and improving line edge roughness (LER) and line width roughness (LWR), critical yield factors. Two times faster than other resists, MTR achieves sub-30 mJ/cm² patterning for lower CoO. Additionally, its PFAS/PFOS-free and metal-free formulations support greener, impurity-free semiconductor manufacturing.

Daniel Armbrust, chairman of the board for Irresistible Materials, said, "We are delighted to welcome Dinesh Bettadapur as our new CEO and board member. With his proven track record in delivering significant business growth across several advanced technologies, vast industry network and entrepreneurial experience, Dinesh is uniquely qualified to lead the company toward establishing a market leadership position for our flagship EUV resist technology."

"I am very pleased to join Irresistible Materials at such an exciting time for the semiconductor industry," said Dinesh Bettadapur. "EUV lithography is critical for the production of nanoscale semiconductor devices, which enable AI, 5G, autonomous vehicles, and high-performance computing. Our innovative MTR resist platform is a key enabler for EUV lithography and has the potential to deliver the highest sensitivity at the best resolution and the lowest LWR to our customers. I look forward to working closely with this world-class team to build on the company's strong technology foundation in order to develop a compelling product roadmap that can fuel customer adoption and business growth. I also plan to establish strong partnerships across the semiconductor ecosystem to enable a complete solution offering."

About Irresistible Materials

Irresistible Materials is a pioneering materials technology company specializing in advanced photoresists for next-generation EUV lithography in semiconductor manufacturing. Its groundbreaking, patented EUV resist material called Multi-Trigger Resist (MTR™) delivers superior imaging performance compared to competing solutions across several key criteria including resolution, line width roughness (LWR), sensitivity, absorbance, defectivity, and etch resistance. Optimized for both low-NA and high-NA EUV, MTR enables IDM and foundry customers to achieve a wider process window and significantly lower cost of ownership for logic and memory devices across multiple applications. Irresistible Materials is headquartered in Birmingham, UK, and has numerous issued patents and patent filings for its MTR platform and related technologies. For more information, visit www.irresistiblematerials.com.

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