

thintronics

BOOTH #2343

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Connecting Minds. Exchanging Ideas.

<https://ims-ieee.org/startupprogram>

Thintronics team is thrilled to participate to IMS2024 Startup Pavilion. Come visit our Booth #2343 or join us at the Entrepreneurship 101 Panel Session in Collaboration with Young Professionals (YP) and Women in Microwaves (WIM).

Thintronics Inc. is a California-based electronic materials startup supplying high-performance insulators for emerging AI datacenter, networking, and RF/millimeter-wave (mmW) applications.

With data centers edging towards 224Gb/s transfer rates and beyond and chipmakers like unveiling multi-die GPUs that triple power requirements, the energy appetite and heat generated by data traffic and computing is no longer just a theoretical challenge. The leading GPU supplier's chipset, for instance, necessitates liquid cooling and a new class of data centers, highlighting the astronomical environmental cost of AI's progress. Conventional solutions like copper cables and silicon photonics introduce their own inefficiencies and failure points. However, Thintronics is on a mission to unlocked the bottleneck of data transfer and power-hungry processing with its novel and unified insulation platform for interconnects.

For RF systems Thintronics' reduced signal loss achievements deliver better connectivity and higher signal quality with a significant improvement over state of the art and the competition.

Thintronics is entering the insulator market with technologies targeting chipsets, switches, and datacenter integrators for 224G links and beyond. For CTO [Tristan El Bouayadi](#), "The combination of superior electrical and thermo-mechanical performance allows our customers to unlock new design possibilities and new applications in Networking, AI acceleration, RF mmW communication, and Radar. Additionally, by synthesizing ultra-thin dielectric layers, Thintronics enables form factor design optimization for Consumer and Infrastructure devices and products."

Thintronics was founded on the idea that conventional assumptions guiding insulator material development limited the capacity of the industry to innovate. Thintronics' CEO [Stefan Pastine](#) emphasizes that "the interconnect insulator is foundational to modern electronics; however, it has yet to be optimized to operate near the theoretical limit of insulation. Additionally, the supply chain is fragmented across multiple electronic architectures. It is our vision to optimize the insulator and unify it across the fabric."

Beyond energy savings and greater thermal efficiency, Thintronics' solution promises to simplify chip design and manufacturing processes by eliminating the need for complex heat sinks or other bulky thermal management systems. The company's novel materials enable wider bandwidths, increased power efficiency, and highly integrated form factors for advanced computing and communication systems.

Thintronics is a key player in reshoring and de-risking the US supply chain in the semiconductor arena.

CTO Tristan El Bouayadi and Senior Director of Application Engineering, Luc Beauvillier, will both be in attendance at IMS 2024 and will be available at the Thintronics booth.