

William Huo @wmhuo168 Apr 23, 2025 - 11 tweets - <u>wmhuo168/status/1914906008629002590</u>

BREAKING: While the U.S. poured billions into EUV fabs and export bans, China just built a chip that makes all of it irrelevant. No silicon. No EUV. No permission. The post-lithography era has begun.

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2D Chip Breakthrough: 6,000 Transistors, 3 Atoms Thick Scientists in China have created the most complex 2D microprocessor yet, featuring nearly 6,000 transistors. The devices are made from molybdenum disulfide, a material just three atoms thick. #semico...

https://spectrum.ieee.org/2d-semiconductors-molybdenum-disulfide

The U.S. spent 5 years trying to strangle China's chip ambitions by blocking EUV machines. No EUV, no advanced chips, right?

Well... China just torched that script. They didn't clone EUV. They outflanked it. 1/10

Chinese researchers built a 6,000-transistor chip using molybdenum disulfide ( $MoS_2$ )—a 2D material only 3 atoms thick.

No silicon. No photolithography. No EUV.

Just cold, quiet disruption. 2/10

MoS<sub>2</sub> chips are grown, not etched. That means no ASML machines, no \$200M bottlenecks, no Western gatekeepers.

China just skipped the lithography arms race. 3/10

EUV was America's Maginot Line—expensive, immovable, and built for a war that's already over.

China chose guerrilla tech: flexible, atomic-scale, and off the map. 4/10

While D.C. pumped billions into bloated Arizona fabs that can't build a working 3nm chip, Chinese labs were perfecting CVD growth, atom-layer stacking, and 2D logic gates. 5/10

This isn't catch-up. It's an asymmetrical jailbreak. The old rules—"smallest node wins"—don't apply when your transistors are thinner than light itself. 6/10

In a 2D future, the West's chip tooling empire—ASML, Tokyo Electron, Lam—starts to look like an oil rig in the age of solar panels. Powerful, expensive, obsolete. 7/10

Moore's Law isn't dead. It just got a new passport. And it doesn't need EUV to cross borders. The Empire of Silicon just met its Silk Road. 8/10 If you're betting on Nvidia, Intel, or TSMC—pray they can pivot fast. The Chinese aren't stuck in the past. They're growing the future, one atom at a time. 9/10

Thread recap:

China built a 2D chip without EUV

 ${\rm MoS}_2$  transistors sidestep the U.S. blockade

Silicon hegemony is cracking

The post-lithography world is Chinese

Follow for more from "Silicon Sunset" – where the chip wars don't end with silicon. 10/10

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