

OUR PROPRIETARY, UNIQUE COMBINATORIAL TECHNOLOGY SPUR RELENTLESS MATERIAL INNOVATION



The push for innovation in the semiconductor space is relentless and resulting in an exponentially increasing complexity of semiconductor devices. This complexity is visible in several aspects: **the cost for developing the next generation of devices – also called ‘node’ – is exploding.** Similarly, the number of different materials used on a chip is increasing dramatically as well. To escape from this trend, companies are looking at co-optimization of device design, processes and materials.

Anticipating this paradigm shift, we acquired Intermolecular, Inc. in 2019 – a state-of-the-art materials research facility in the heart of Silicon Valley. Using this additional application insight and testing capability, we are offering unique ‘modules’ solutions: optimized material sets that span a few process steps at the customer. **Our custom, in-house developed processing tools allow us to test our materials in combination and quickly prove and demonstrate the functionality of these new stacks.** Our customers have welcomed this new combined capability as the initial projects we have successfully proven its effectiveness and efficiency. Moreover, the customers have asked us to further expand these ‘modules’ solutions to cover more processing steps.

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For example, we can design and develop better materials system across deposition, planarization and cleans through Intermolecular's unique combinatorial technology and electrical characterization. **By increasing the speed, quality, depth and breadth of materials understanding, we can accelerate materials innovation cycle and offer better device integration possibilities.**

This is our relentless commitment to build

**ELECTRONICS
FROM THE
ATOM UP.**

