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ADVANCED CHEMICAL ETCHING

a process of innovation

What is ACE Molecular Etching?

Turning a Black Art into a Science

- Etchant developed and formulated as a complex reagent for the chemical reaction
- Formulate a chemical equations, which graphically present the starting materials and end products, as well as the reaction conditions.





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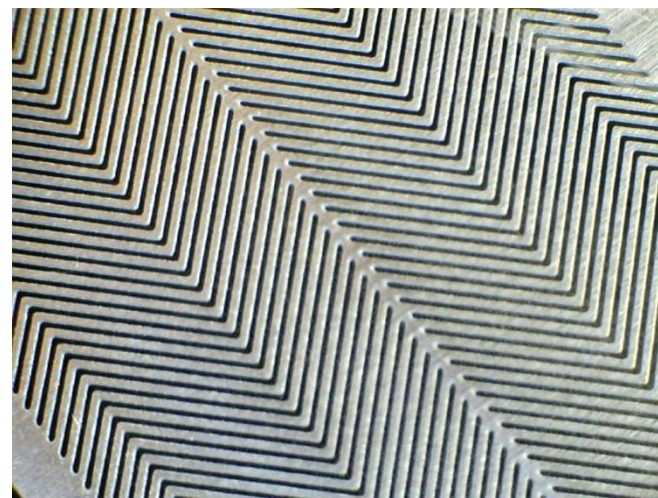
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What is ACE Molecular Etching?

Safer Chemistry

Know the outcome and the resultant compounds and their properties





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What is ACE Molecular Etching?

Faster Chemistry

Rate of reaction and speed of process is known,
designed and controlled





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What is ACE Molecular Etching?

Greener Chemistry

We have the ability to reverse the process to recover materials.





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ACE Molecular Etching for Net Shape?

- High accuracy ($\pm 10\%$ of material thickness))
- No burrs for subsequent removal (as in punching)
- No material stress (as in pressing)
- No requirement for tool wear compensation
- Ambient/low temperature process... no heat distortion or partial tempering (as in laser cutting)
- Built-in special features e.g. depth etch
- Economical from one to millions
- Low initial set-up and modification costs



Single process • Maintains material properties • Produces net shape