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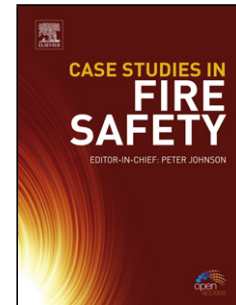
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# Transition from superhydrophilic to superhydrophobic state of laser textured stainless steel surface and its effect on corrosion resistance

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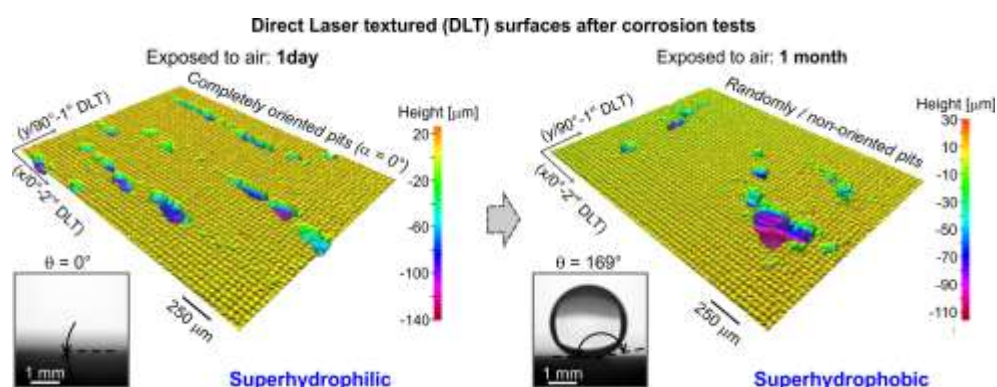
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## Highlights

- Laser textured superhydrophilic surface changes in superhydrophobic in 1 month.
- Development of water repellency correlates with improved corrosion resistance.
- Higher resistance measured on textured than base surface with lower roughness.
- In superhydrophilic state corrosion propagates along the last texturing passage.
- Laser texturing completely inhibits the intergranular corrosion attack.

## Graphical abstract



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