

Stable speckle patterns for nano-scale strain mapping up to 700 °C

Experimental Mechanics

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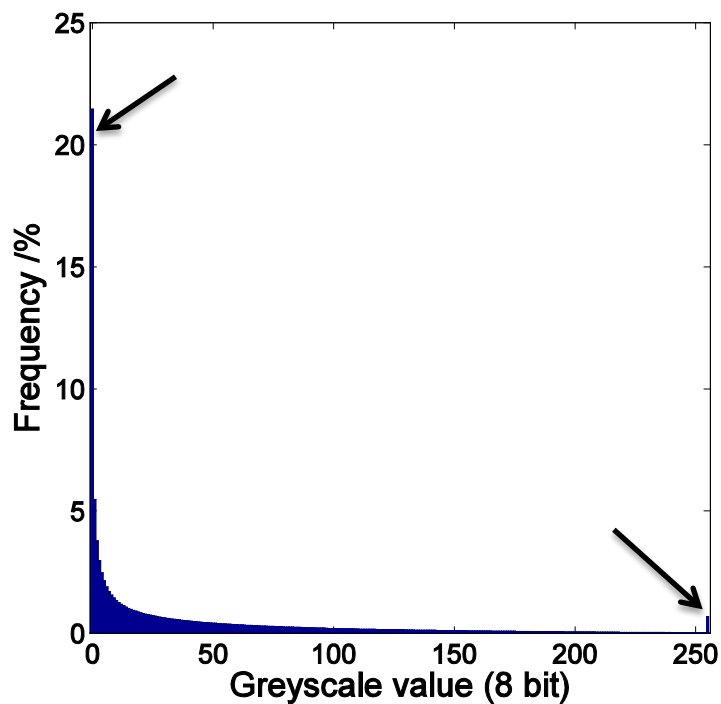
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Histogram of pixel intensities for a backscatter image of the high temperature suitable reconstructed Au speckle pattern taken in standard conditions for DIC employed here. Arrowed are the two extremity maxima. Unlike commonly employed speckle patterns which possess a smooth, bimodal distribution of pixel intensities, the aim here was to push the peaks of the bimodes to extreme values to exclude imaging of the underlying dual-phase titanium aluminide and thermally grown oxides