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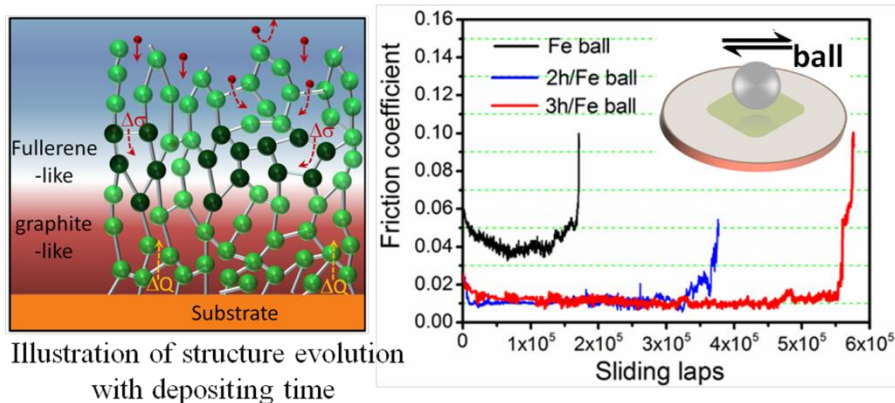
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Graphical abstract



Highlights

1. The steel ball-film structure transformed from graphite-like to fullerene-like structure.
2. The Si substrate-film structure began in FL structure and kept it through the thickness.

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