

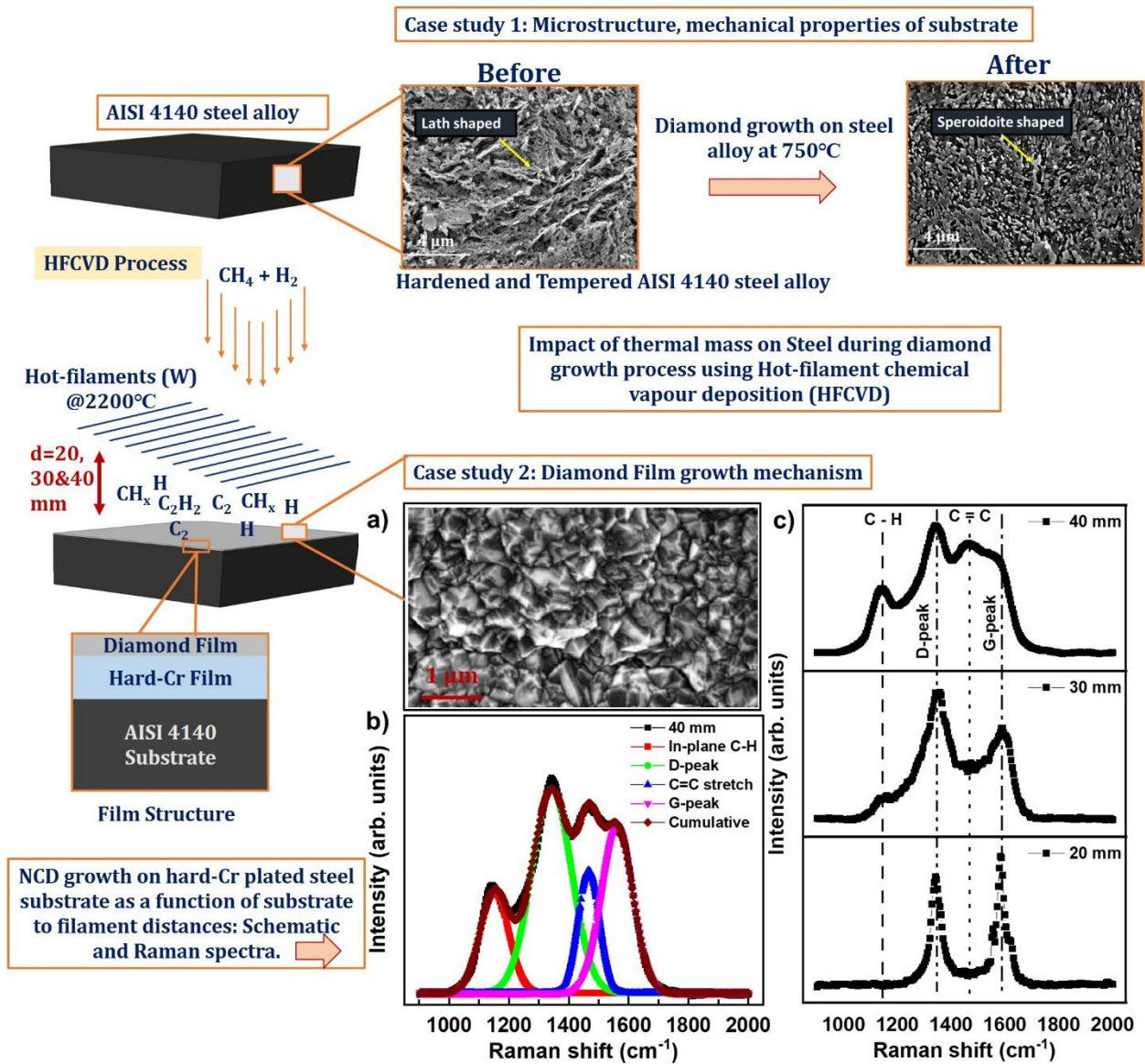
# Investigation of diamond coating characteristics on chrome-plated AISI 4140 steel by hot-filament chemical vapour deposition process

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## Graphical Abstract:



## **Highlights**

- Diamond films were deposited on hard-Cr plated AISI 4140 (tempered) steel by HFCVD process.
- With filament-substrate distance, Nano-crystalline diamond phases increased from the graphitic phase structure.
- Microstructural and mechanical tests were performed on steel substrate were found to be highly influenced by the diamond deposition process temperature.