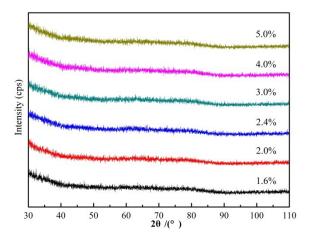
## **Supplementary Data**

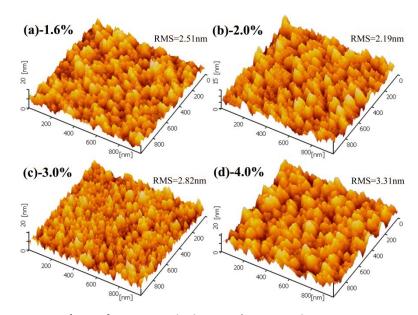
## Influence of CH<sub>4</sub>-Ar ratios on composition, microstructure and optical properties of Be<sub>2</sub>C films synthesized by DC reactive magnetron sputtering

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Supplementary Data Fig. S1 | XRD patterns of as-deposited Be<sub>2</sub>C films prepared at various CH<sub>4</sub>-Ar ratios.



Supplementary Data Fig.S2 | Surface morphologies (AFM 3-dimension images) of the  $Be_2C$  films deposited at (a) 1.6%, (b) 2.0%, (c) 3.0% and (d) 4.0%  $CH_4$ -Ar ratios and their corresponding RMS

roughness.