

The Influence of Annealing Temperature on the Interfacial Heat Transfer in Pulsed Laser Deposition-Grown Ga_2O_3 on Diamond Composite Substrates

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Surface Morphology Dependence of Annealing Atmosphere

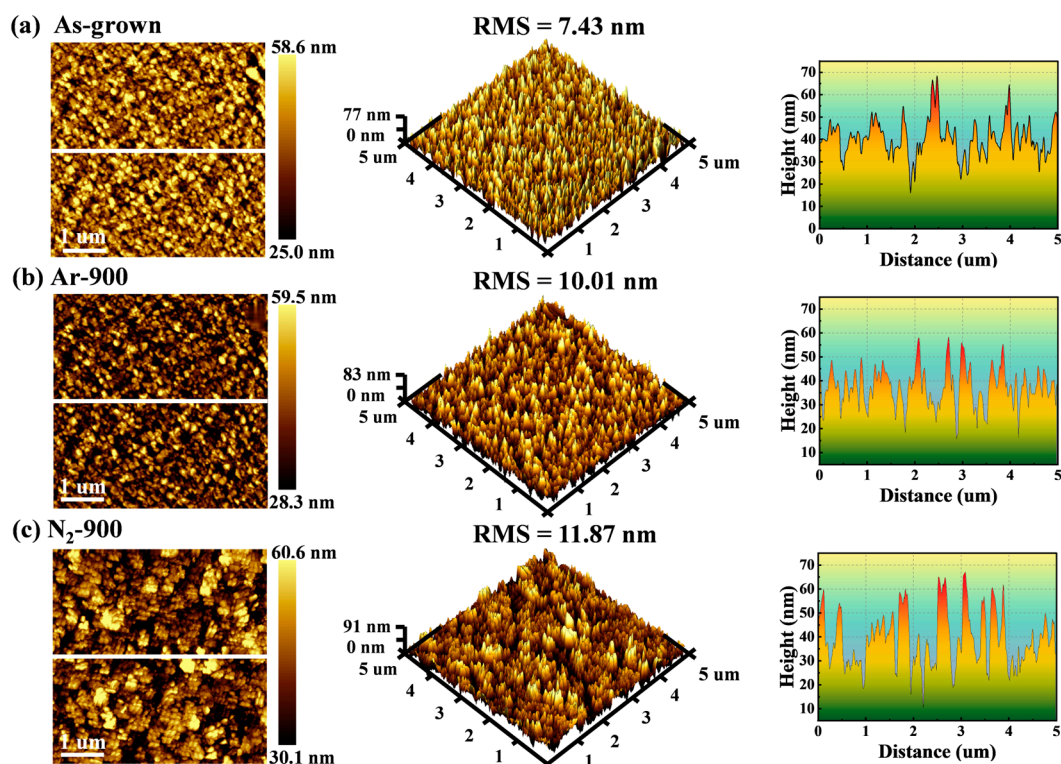


Figure S1. AFM images of Ga_2O_3 films on diamond composite substrates at different annealing atmospheres: (a) as-grown; (b) Ar; (c) N_2 .

Surface Vacancy Defects Dependence of Annealing Atmosphere

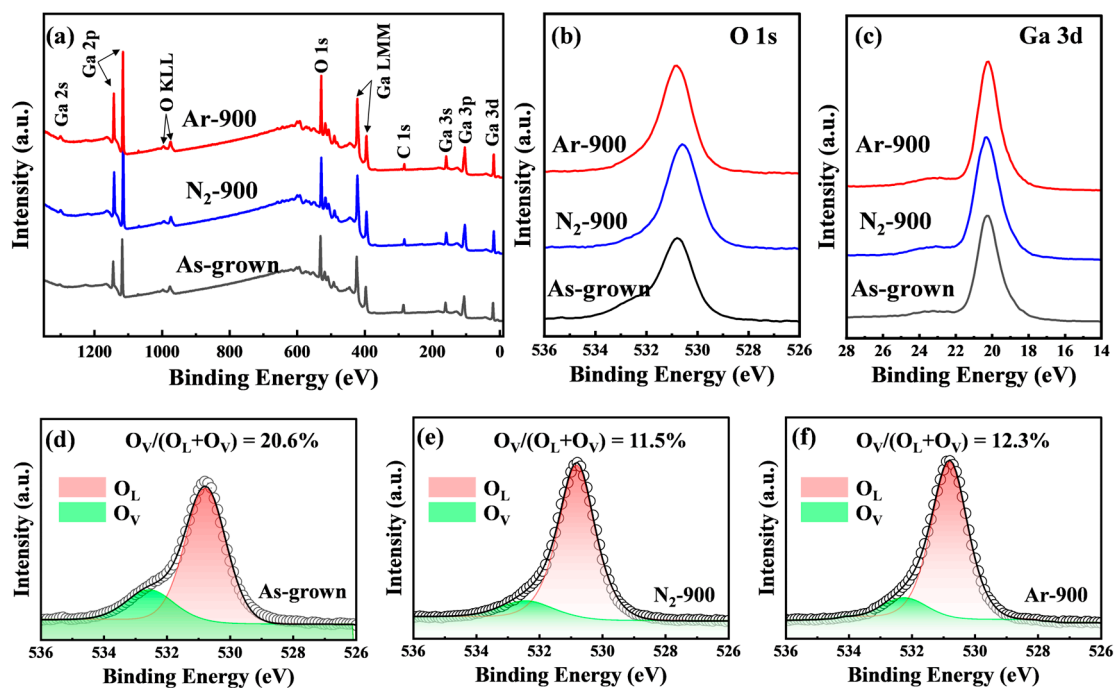


Figure S2. (a) XPS survey, (b) O 1s, and (c) Ga 3d of Ga_2O_3 films on diamond composite substrates at different annealing atmospheres. (d-i) O 1s peak fitting.

Thermal Properties Dependence of Annealing Atmosphere

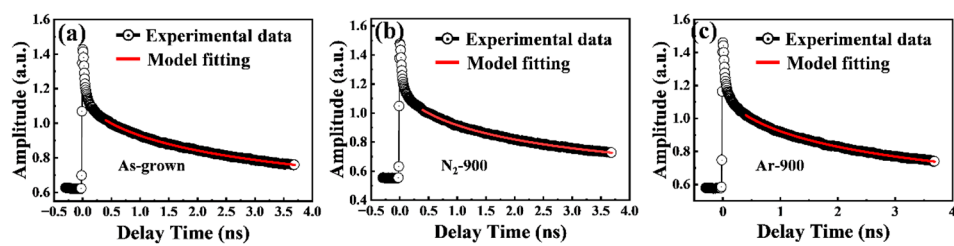


Figure S3. TDTR signal intensity versus delay time at different annealing atmospheres: (a) as-grown; (b) N₂; (c) Ar.