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Growth & characterisation of diamond films in magnetron sputtering by spin coating

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Abstract. There is a growing necessity for materials to be used under extreme conditions. Diamond is well known as an excellent material which has high hardness, good thermal conductivity and chemical resistance. In this study, we tried to grow diamond films on p-type silicon substrate and also on glass substrates by using the method of spin coating. Diamond films were grown by direct current (DC) unbalanced magnetron sputtering. The physical and electrical properties of diamond films were investigated by Scanning electron microscopy (SEM),thin films X-ray diffraction (XRD) and Rutherford backscattering (RBS). The pressure was maintained at 3x10-3 Torr while bleeding C2H2 into the chamber.
Keywords: Diamond films, spin coating, DC magnetron sputtering & CVD method, surface morphology

Apply to be
 considered for a student
   award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
   PhD, N/A)?

MSc

Main supervisor (name and email)
and his / her institution

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Would you like to
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Yes

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