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Type: **Oral Presentation**

## Conductivity crossover in hot filament CVD grown nano-crystalline diamond films doped with nitrogen.

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We report on the synthesis and electrical characterization of nano-crystalline diamond films grown by hot filament chemical vapor deposition. Low temperature magnetoresistance measurements have shown a crossover in conductivity from hopping, activated to semi-metallic conduction as the nitrogen level in the CVD chamber is increased from 10

**Level (Hons, MSc, <br> &nbsp; PhD, other)?**

MSc

**Consider for a student <br> &nbsp; award (Yes / No)?**

Yes

**Would you like to <br> submit a short paper <br> for the Conference <br> Proceedings (Yes / No)?**

No

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**Session Classification:** CMPMS2

**Track Classification:** Track A - Condensed Matter Physics and Material Science