

## **Diamond coating (Technion)**

**code:** CHM-1368

The industrial use of diamond films for coating various substrates increases constantly due to diamond's exceptional optical, mechanical, thermal and electrical properties. However, diamond coatings exhibit poor adhesion when deposited onto metallic substrates such as steel and tungsten carbide. The latter is used for industrial cutting tools and there is a great need for a durable diamond coating on these components to enhance their capability and lifetime. This invention uses an interlayer that acts as a diffusion barrier that adheres well to the metallic substrate and acts as a substrate for the diamond coating creating a coating with superior properties.

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