Thin films and Ionized Jet Deposition

Vojtech Stransky



- 1 Thin films
- 2 Ionized Jet Deposition
- 3 Conclusion

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What are thin films?

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- definition depends on application
- layer of material applied on "substrate"
- thickness is from nanometer to several micrometers







Where can I find thin films?



[2]



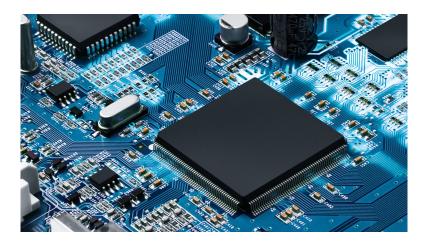
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[3]



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[4]



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Introduction to IJD

- thin film deposition method
- uses electron ablation process
- application of almost all materials is possible
- cheaper than pulsed laser deposition



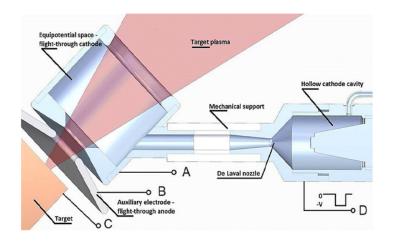
How does the device work?







How does the device work?



[6]





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Are thin films really that important?

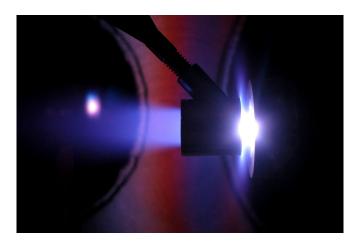
- many devices would not work without thin films
- everybody uses thin films every days

Why should I choose IJD?

- it helps to create better thin films
- it is one of most advanced deposition methods
- it helps to discover new high temperature superconductors



Why should I choose IJD?



[7]



[1] pat, "China Quality Inspection for China Carbide Tools End Mill & Milling Cutting and Cutting Cutter manufacturers and suppliers | KAIHUA — kaihuamoulds.com." https://www.kaihuamoulds.com/ quality-inspection-for-china-carbide-tools-end-mill-mil

[Accessed 13-11-2024].

[2] "GlasFlength Full Length Floor Mirror 51"x16" Large Rectangle Wall Mirror Hanging or Leaning Against Wall for Bedroom, Dressing and Wall-Mounted Thin Frame Mirror -Black: Amazon.ca: Home — amazon.ca." https://www.amazon.ca/ GlasFlength-Rectangle-Hanging-Dressing-Wall-Mounted/ dp/BOCT5WS3GW. [Accessed 13-11-2024].

- [3] "Telescópio gigante." https://vidroimpresso.com.br/telescopio-gigante/. [Accessed 13-11-2024].
- [4] "Unlocking the power of Xpedition resources.sw.siemens.com." https://resources.sw.siemens.com/cs-CZ/ e-book-unlocking-the-power-of-xpedition. [Accessed 13-11-2024].
- [5] A. Liguori, C. Gualandi, M. L. Focarete, F. Biscarini, and M. Bianchi, "The pulsed electron deposition technique for biomedical applications: A review," *Coatings*, vol. 10, p. 16, Dec. 2019.

- [6] J. Skocdopole, L. Aversa, M. Golan, A. Schenk, G. Baldi, I. Kratochvilova, L. Kalvoda, and P. Nozar, "Preparing of the chameleon coating by the ion jet deposition method," *Acta Polytechnica CTU Proceedings*, vol. 9, p. 19, July 2017.
- [7] "IONIZED JET DEPOSITION SS Scientific Precision in Vacuum — s3vacuum.com." https://s3vacuum.com/ product-catalogue/ion-jet-deposition/. [Accessed 13-11-2024].