

EXPERIMENTAL DEVICE FOR 2D MATERIALS PREPARATION BY LASER-PLASMA METHOD

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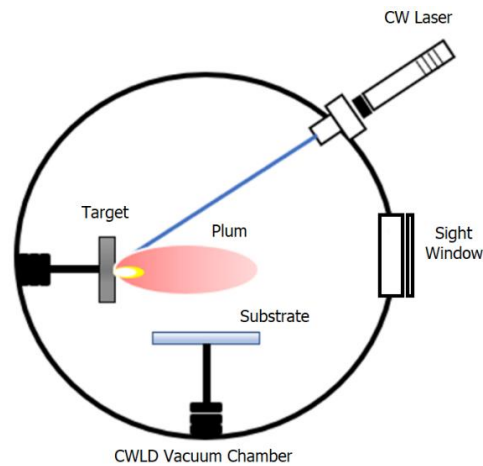
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Two-dimensional (2D) materials have attracted enormous research interest due to their predominant quantum effects and fascinating materials properties, that potentially lead to different important applications. 2D materials physical properties such as the other materials come out their structure quality. On the other hand, refer to their critical Nano sizes, manufacturing requires very accurate methodology. Hence, Thin-Film methodology is significant.

However, there are various methods, but they categorized in 2 Thin-Film methodologies as *Physical Vapor Deposition* (PLD) and *Chemical Vapor Deposition* (CVD). Thin-Film methodologies assessment are correlated to the final product quality and production cost. Therefore, the methodology flexibility and feasibility are the main factors.

In the presenting work, a novel and patented method as Thin-Film preparation by Laser-Plasma (CWLD) is introduced [1,2]. Also, the method is comprised to the other common methods and its flexibility and feasibility will be investigated.



References

- [1] Bakhtiari A., Maier W., Kervalishvili P. Device for obtaining solid-state films by laser-plasma method Georgian Intellectual Properties Center, Patent applied 2021 (Case No. 15728/1)
- [2] Bakhtiari A., Berberashvili T., Kervalishvili P. Preparation of Graphene Structures by Continuous Wavelength Laser Deposition Method, American Journal of Condensed Matter Physics 2022