

## **Electronic Supplementary Information (ESI) for**

# **Simplistic Construction of Cadmium Sulfoselenide Thin Films via Hybrid Chemical Process for Enhanced Photoelectrochemical Performance**

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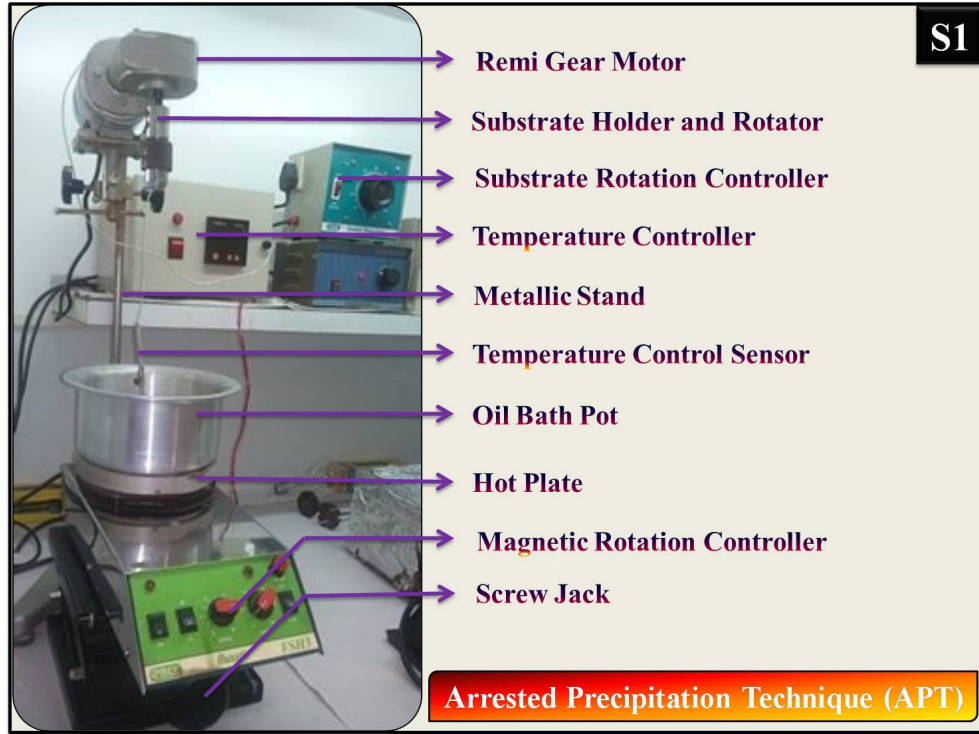
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## Thin Films Deposition Assemebly



**Figure S1:** Photograph of cross sectional view of arrested precipitation technique (APT).



**Figure S2:** Photograph of substrate holder.

Figure S1 highlights side view of thin films deposition technique and their associated accessories. It contains temperature controller assembly, metallic stand, reaction oil bath, constant remi gear motor, substrate rotation controller, etc. Overall assembly of arrested precipitation technique (APT) is fitted in thin films deposition chamber to maintain clean and ambient atmosphere for deposition and to avoid physical hazards and corrosion. Such developed synthesis chamber is working with exhaust fan to remove toxic gases and to maintain internal atmosphere constant during thin films deposition. The substrate rotation is controlled through dimerstat. Temperature is monitored using temperature controller with sensor.

Figure S2 shows photograph of substrate holder used for deposition of thin films via APT. To deposit uniform, well adherent and homogenous deposition of materials overall substrate surface substrate holder plays essential role. The circular disc like dimension of substrate holder is clearly seen in Figure S2 with containing four slots perpendicular to each other. Such slots are used for fitting the substrates to be deposited by screws. All substrates are fitted in such a way that during rotation substrates are not touches to each other as well inner wall of deposition bath containing beaker. Such assembled substrate holder is attached to remi gear motor (Figure S1) containing rotating shaft.

Overall fabricated APT technique and their respective assembly are demonstrated with their photographs (Figure S1 and S2) and their working principle shortly.