Propositions

accompanying the dissertation

ENGINEERING COMPLEX OXIDE INTERFACES FOR OXIDE ELECTRONICS

1. Complex oxide and multiferroic thin film materials represent an important technology for emerging memory and logic applications. The key challenge lies in optimizing the growth and analyzing their device response.

2. Interfaces of complex oxides allow a further degree of freedom to tailor device performances. For ultra-thin films, their influence is stronger than the bulk contribution.

3. The nanoscale probing technique of ballistic electron emission microcsopy (BEEM) has a great potential to unravel many secrets of interfaces.

4. In research, every idea needs to be explored with equal interest.

5. Upscaling the pulsed laser deposition (PLD) technique for controlled thin film growth with nanoscale precision is a major roadblock in using complex oxides for industrial applications.

6. A key ingredient in research is patience. It is not simply the ability to wait, rather how matured we get as we wait.

7. Collaborations introduce researchers to newer ideas, which are instrumental for an in-depth understanding and furthering of science.

8. The greatest sin is to think yourself weak. - *Swami Vivekananda* -

9. Believe in yourself! Have faith in your abilities! Without a humble but reasonable confidence in your own powers you cannot be successful or happy. - *Norman Vincent Peale* -

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