

Interfaces of oxide materials

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In this talk, we highlight the important of oxide interfaces, especially for energy related applications such as photovoltaic, electrochromic or photocatalysis etc. We highlight how modification of oxide surface or interfaces can lead to significant improvements in various device performances. This will be discussed in areas of photocatalysis, organic and inorganic photovoltaic. We will also show that a study of reactions at the interface can be useful in both the growth and understanding of oxides for applications such as transparent conductors, electrochromic and transistor devices. Finally, we will briefly discuss the prediction of dipoles at oxide interfaces using simple electronegativity concepts.