

*Lectures, Presentations etc*

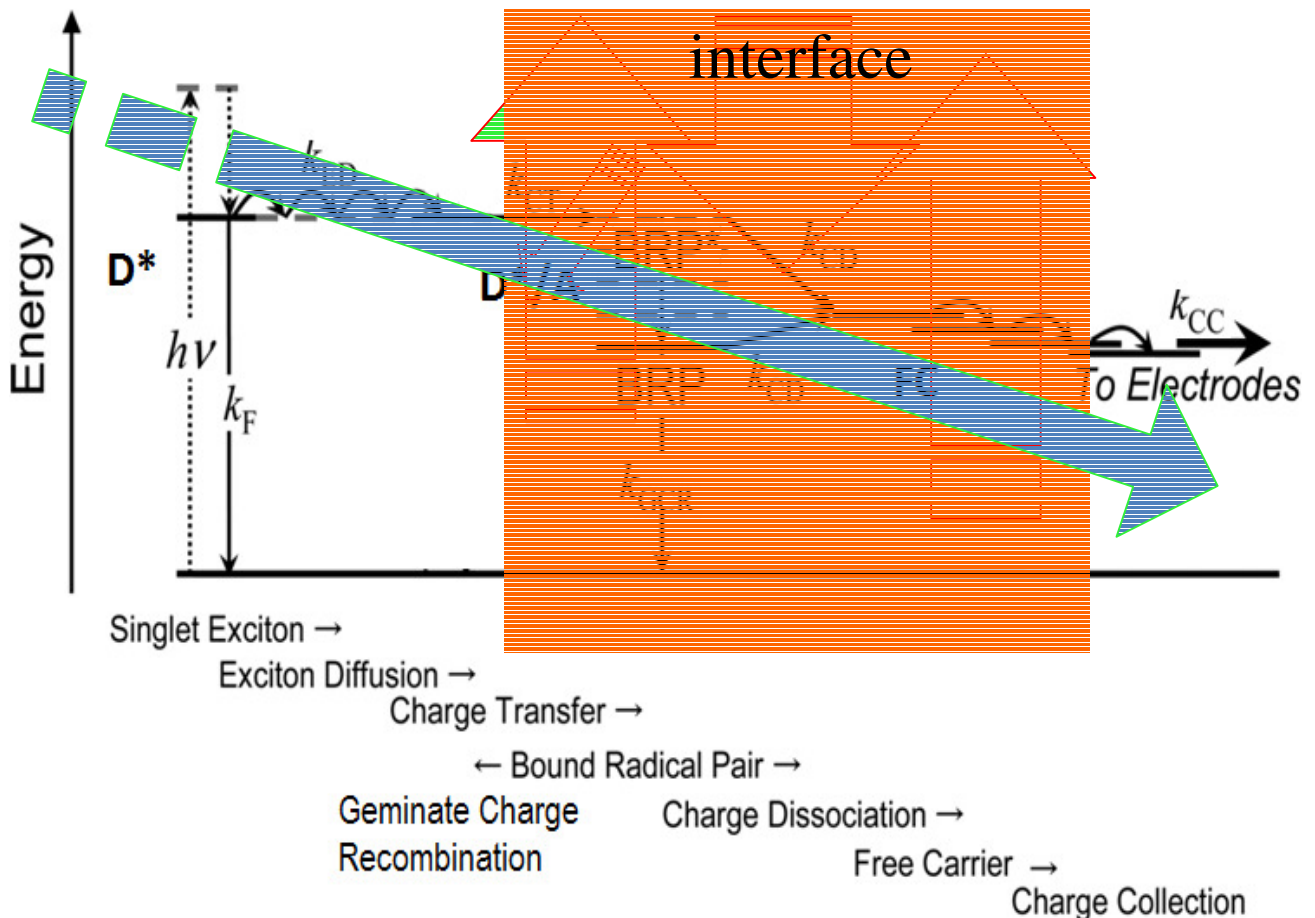
**Lecture 2. “Hybrid organic-inorganic heterojunctions: Principles of functioning and application in solar cells” by Dr. Oleg P. Dimitriev.**

Here you can find following information:

1. Fundamentals of hybrid organic-inorganic heterojunctions
  - Introduction: The concept of a hybrid exciton.
  - Processes at hybrid interfaces.
  - Energetics at hybrid interfaces.
  - Operational principles of functioning of hybrid heterojunctions.
  - Examples of hybrid heterojunctions.
2. Hybrid solar cells
  - Advantages of hybrid heterostructures.
  - Materials used.
  - The operational principles and main types of hybrid solar cells.
  - Strategies to improve PV performance.
  - Examples of hybrid solar cells.

Photovoltaic performance of hybrid organic-inorganic cells is largely dependent on inorganic morphology and the cell type:

- Nanowire morphology yields improved photocurrent due to improved efficiency in collection of charge carriers.
- Polymer-CdS, inverted and electrochemical cells evidently demonstrate higher efficiency when CdS layer has a nanowire morphology.
- Textured morphology normally gives better open-circuit voltage and fill factor.
- Optimization of the cells requires search for the compromise solutions in cell morphology and structure.



We are looking for feedback, new proposals for lectures, presentations, etc.  
 SPQEO Editorial Board