



HTTR
北京华通特瑞
GSI
台北广集

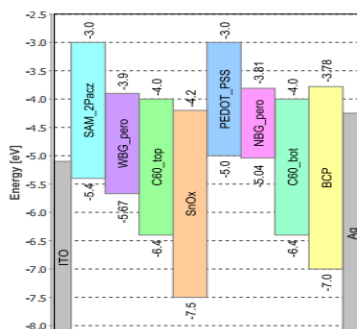
All-Pero 2 Terminal Tandem Solar Cell

钙钛矿Perovskite(Pero)薄膜光电器件具备极大市场应用潜力和有望大幅提升性能, 如钙钛矿光伏优化QFLs/Voc增加, LED光子再利用PR/EQE提高。

FLUXiM在欧盟SuPerTandem/MUSICODE研究项目下, 基于偶极子Dipole emission模型, 电磁波格林函数Green Function和包括Scattering, Ray Tracing等多尺度模型, 利用Setfos/Laoss模拟仿真软件, 充分考虑光子Dipole取向, secondary generation. re-distribution/re-absorption 提出全钙钛矿Tandem solar cell新型光电产生机制:

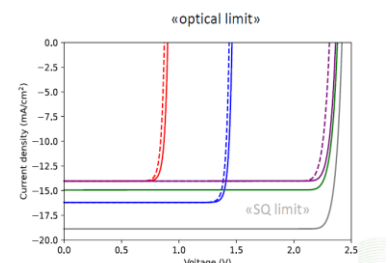
- **Photon Recycling (PR)**
- **Luminescent Coupling(LC)**

SuPerTandem (www.supertandem.eu) 目标: **32% PCE on small area Cell, >30% Module efficiency (>100 cm²)**, 同时模拟分析模组遮挡和不同移动离子浓度下的反向电压/击穿Breakdown.



optical simulation

- TMM for coherent optics
- Ray-tracing for scattering
- Photon recycling & luminescent coupling



electrical simulation

- Drift-diffusion-Poisson
- Mobile ions
- Bulk & interface defects
- Recombination junction

