Contribution ID: **159** Type: **Poster Presentation**

Optimizing the organic Solar cell efficiency with the addition of dyes and nanoparticles.

Organic solar cells based on ZnO nanorods have been fabricated using inverted architecture and reported an efficiency of 4.6 %. Adding Cu nanoparticles and SQ dyes to both electron and hole transport layers further improved the conductivity of the solar cell. The structure of the solar cell used employed ITO substrate with PCBM, P3HT and PEDOT:PSS as polymers. The results shows that the device can be improved to a complete polymer solar cell which adds to low cost and light weight for applications in smart windows. The final results shows improved efficiency for the overall solar cell.

Apply to be
 considered for a student
   award (Yes / No)?

No

Level for award
 (Hons, MSc,
   PhD, N/A)?

N/A

Primary author: Dr DIALE, Mmantsae (University of Pretoria)

Co-author: Dr MUNYATI, Onesmus (University of Zambia)

Presenter: Dr DIALE, Mmantsae (University of Pretoria)

Session Classification: Poster Session 1

Track Classification: Track F - Applied Physics