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High and Low Concentrator Systems for Solar Electric Applications VIII

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Contents

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Introduction

While turbulence in the solar energy industry continued into 2013, I am pleased to report that research on the topics of high and low concentrator systems for solar electric generation is strong. Novel topics such as luminescent, holographic and spectrum splitting solar concentrators continue to press forward with experts coming to SPIE from around the world to share research, ideas, and results. Traditional topics including high concentration systems and high concentration optics also reported exciting levels of innovation for this past year. Here are a few highlights from the 2013 program:

- The conference started with a presentation from Esmaeil-Hooman Banaei on a novel luminescent solar concentrator design with strong promise for easy manufacturing and low cost.
- Three Ph.D candidates, Sunita Darbe, Emily Kosten and Carissa Eisler, from Harry Atwater's research group at Caltech presented exciting work on three different spectrum splitting concentrators, each with promise to reach drastically higher efficiencies than currently achievable with CPV.
- Juan Russo updated the conference on progress in spectrum splitting with holographic optical elements under development at Raymond Kostuk's lab at the University of Arizona.
- Joao Mendes-Lopes and Professor, SPIE Fellow and A.E. Conrady Award winner Juan Carlos Minano updated the conference on progress with Fresnel Kohler optical designs for concentrator systems.

Overall, concentrator research continues to show strong promise for improving performance and lowering the cost of solar energy systems in the near future. I encourage readers to review all of the manuscripts in this year's program, contact authors and get involved in taking these exciting research topics to the next level.

In addition to this year's strong program, a few changes are in store for the 2014 program. First, the conference name will be officially changed to High and Low Concentrator Systems for Solar Energy Applications IX to be more inclusive of optical concentration technologies for purpose of solar energy collection, not just solar energy collection for the purpose of photovoltaic electricity generation. This includes technology and optical research from groups working with concentrating solar power (CSP). The conference leadership believes that SPIE Optics and Photonics is the perfect forum for discussion of mutual interests on the topic of concentrator optics for CPV and CSP, starting in 2014.

Thanks to all of our authors and presenters for a successful 2013 program. I look forward to seeing all of you again next year!

Adam P. Plesniak