



## Status and Prognosis of Future Generation Photoconversion to Photovoltaics and Solar Fuels

*In recognition of the scientific contributions of Professor Art Nozik*

**Friday – March 25<sup>th</sup>**

| Time            | Speaker            | Title   |
|-----------------|--------------------|---|
| 8:15 - 8:30am   | Bob McGrath        | Introduction  |
| 8:30 - 9:00am   | Nate Lewis         | Will Solar Fuels Technology See the Light of Day?   |
| 9:00 - 9:30am   | Bruce Parkinson    | Multiple Exciton Generation and Collection: Two and Going for Three   |
| 9:30 - 10:00am  | Xiaoyang Zhu       | Realizing the Nozik Solar Cells with Bi-excitons and Hot Electrons  |
| 10:00 - 10:30am | <b>Break</b>       |   |
| 10:30 - 11:00am | Millie Dresselhaus | Perspectives on the Future of Renewable Energy from Another Four-Score Celebrant  |
| 11:00 - 11:30am | Alex Zunger        | Nanoscience as a Design Problem   |
| 11:30 - 12:00pm | Shozo Yanagida     | Molecular Modeling on Photoconversion Elements  |
| 12:00 - 12:30pm | Casey Hynes        | Reduction of CO <sub>2</sub> to Methanol by an Organic Hydride via Hydride Transfer/Proton Transfer Steps                                       |
| 12:30 - 1:30pm  | <b>Lunch</b>       |   |
| 1:30 - 2:00pm   | Mark Ratner        | Giddy Guided Heights for Charge Motion  |
| 2:00 - 2:30pm   | Prashant Kamat     | Semiconductor Quantum Dots to Organic Lead Halide Perovskites Paving The Way Towards Nextgen Photovoltaics                                      |
| 2:30 - 3:00pm   | Tim Lian           | The “Art” of Hot Electron Transfer: Efficient Plasmon-Induced Hot Electron Transfer and Photochemistry in Semiconductor-Au Nanoheterostructures |
| 3:00 - 3:30pm   | David Jonas        | How Shared Vibrations Drive Photosynthetic Energy Transfer  |
| 3:30 - 4:00pm   | <b>Break</b>       |   |
| 4:00 - 4:30pm   | Efrat Lifshitz     | Long-term Collaboration and Friendship with Prof. Arthur J. Nozik   |
| 4:30 - 5:00pm   | Tom Meyer          | Water Splitting in Dye Sensitized Photoelectrosynthesis Cells   |
| 5:00 - 5:30pm   | Art Nozik          | New Concepts for Future Generation Solar Photoconversion  |
| 5:30 - 5:40pm   | Garry Rumbles      | Final Comments  |