



**15th Sede Boqer Symposium
on Solar Electricity Production
October 27 – 29, 2008
AND
ISES ISRAEL ANNUAL MEETING**

Sponsored by:

Ben-Gurion University of the Negev.
Blaustein International Center for Scientific Cooperation.
International Solar Energy Society - Israel Section
Solel Solar Systems Ltd.

Program

Monday, October 27, 2008

10:30 – 11:00 Arrival at the Ben-Gurion National Solar Energy Center, Midreshet Ben-Gurion,
Registration

10:30-11:00 **Opening Greetings**
(Chair: Prof. **David Faiman**, BGU Blaustein Institutes, Sede Boqer)

ISES



Israel Section



11:00-12:00 Session 1: Invited Keynote Lecture and Discussion

(Chair: Prof.)

*If the leaf can do it, we can do it***Prof. James Barber**

Imperial College, London

12:00-13:30 Lunch – Dining Room, High School for Environmental Studies**13:30-15:00 Session 2: Photovoltaics I**

(Chair: Prof.)

1. *Photovoltaic devices based on photosynthesis reaction center protein*
Chanoch Carmeli¹, Ludmila Frolov¹, Yossi Rosenwaks², Michael Chichik³, Shachar Richter³ and Itai Carmeli³
¹Departments of Biochemistry, ²Physical Electronics and ³Chemistry, Tel Aviv University, Tel Aviv, Israel
2. *Understanding photosynthesis: Electron transport in single biomolecular wires*
Iris Visoly-Fisher¹, Kavyon Daie¹, Yuichi Terazaono², Christian Herrero², Fernando Fungo³, Luis Otero³, Edgardo Durantini³, Juana J. Silber³, Leonides Serreno³, Devens Gust³, Thomas A. Moore², Ana L. Moore² and Stuart M. Lindsay¹
¹Dept. of Chemistry, Ben Gurion University, Beersheva, Israel; ²Arizona State Univ, AZ, USA; ³Universidad Nacional de Rio Cuarto, Argentina
3. *Modeling the effect of the structure of polymer photocells on their absorption spectrum*
Rafi Shikler^{1,2} and Richard H. Friend²
¹Dept. of Electrical & Computer Engineering, Ben Gurion University, Beersheva Israel and ²Cavendish Laboratory, Cambridge CB3 0HE, UK
4. *Reversible degradation of plastic solar cells: underlying mechanism*
Eugene Katz
Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel
5. *Reversible degradation of plastic solar cells: underlying mechanism*
Celine Bonioux and Eugene Katz
Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel

15:00-15:30 Coffee break**15:30-17:00 Session 3: Photovoltaics II**

(Chair: Prof.)

1. *Can up and down conversion and multi-exciton generation improve photovoltaics?*



Israel Section



- Hagay Shpaisman**, Olivia Niitsoo, Igor Lubomirsky and David Cahen
Dept. of Materials and Interfaces, Weizmann Inst. of Science, 76100 Rehovot, Israel
2. *Study of different light bias sources for Si solar cell spectral response measurements*
Ygal Eisenberg, Lev Kreinin, Ninel Bordin and Naftali Eisenberg
Jerusalem College of Technology, POB 16031, 91160 Jerusalem, Israel
 3. *A metal - organic insulator - semiconductor solar cell, based on molecular monolayer self-assembly on n-Si*
Rotem Har-Lavan, Izhar Ron, Florent Thieblemont and David Cahen
Dept. of Materials and Interfaces, Weizmann Inst. of Science, 76100 Rehovot, Israel
 4. *Wet-chemical synthesized Extremely Thin Absorber(ETA) solar cells with CdS and Cu_{2-x}S absorbers*
Olivia Niitso, Miles G. Page, Yafit Itzhaik, David Cahen and Gary Hodes
Dept. of Materials and Interfaces, Weizmann Inst. of Science, 76100 Rehovot, Israel
 5. *Recent developments in dye sensitized solar cells at 3GSolar*
Jonathan Goldstein, Ilya Yakupov and Barry Breen
3G Solar, AVX Building, 3 Hamarpeh St., Har Hotzvim Technology Park, 91450 Jerusalem, Israel

17:00-18:00 Guided tour of the Ben-Gurion National Solar Energy Center at Sede Boqer

18:30-19:30 **Dinner** - Dining Room, High School for Environmental Studies

Tuesday, October 28, 2008

9:00-10:30 Session 4: System Issues

(Chair: Prof.)

1. *Field-level effects in rooftop arrays of small parabolic dishes*
Yosef Meller, Gil Shelef and Avraham Kribus
Tel Aviv University, Israel
3. *Negative impact of dust on the efficiency of solar energy production*
Sergey Biryukov and Leonid Yarmolinsky
Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel
2. *PV module stability experience at Sede Boqer*
David Faiman
Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel
4. *Negative impact of clouds on the efficiency of solar energy production*
Sergey Biryukov
Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel
5. *Photovoltaic concentrators with unfolded aplanatic optics*
Jeffrey M. Gordon¹, **Daniel Feuermann**¹ and Pete Young²
¹ Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990



Midreshet Ben Gurion, Israel; ²SolFocus, Mountain View CA, USA

10:30-11:00 Coffee Break

11:00-12:00 **Session 5: Invited Keynote Lecture and Discussion**

(Chair:

Nuclear Power – the French Experience

Dr. George Serviere

Électricité de France

12:00-13:30 Lunch – Dining room, High school for environmental studies

13:30-15:00 **Session 6: Solar-Thermal**

(Chair: Prof.)

1. *Solel – Spanish Solar Thermal Project*

Kenny Kleinerman

Solel Solar Systems Ltd., Beit Shemesh, Israel

2. *Evaluating a long-term thermal storage system for solar energy*

Roman Adinberg,

Weizmann Institute of Science, Rehovot. 76100

3. *Thermal measurements of a CSP tower system: use of a thermal imager in the tower control system*

Ophir Chernin

Luz II/Bright Source

4. *A building-integrated spherical collector concentrating PV thermal system*

Mordechai Arenson

Ormat, Yavne and Tel Aviv University, Israel

5. *The Zenith Solar Z-10 CSP system*

Roy Segev

Zenith Solar Ltd, Nes Ziona Israel

15:00-15:30 Coffee break

15:30-16:30 **Session 7: Invited Keynote Lecture and Discussion**

(Chair: Prof.)

State of the art solar plant technologies and their cost effectiveness

Prof. Aaron Roy

Ben-Gurion University of the Negev

16:30-18:00 **Session 8: Long-term PV Issues**

(Chair: Prof.)

1. *A dynamical thermal model of a PV panel*

Anat Razon and David Faiman



Israel Section



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2. *First efficiency measurements of 3J cells using PETAL*

David Faiman, Sergey Biryukov, Leonid Yarmolinsky, Shlomo Kabalo, Vladimir Melnichak and Dov Bukovza

Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel

3. *Aspects of storage battery use*

Moshe Averbukh

Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel

4. *How large can Israeli PV systems be?*

A. A. Solomon

Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel

5. *Economic analysis of the Israeli feed-in tariff*

Hanoch Friedman and Yaakov Garb

Jacob Blaustein Institutes for Desert Research, Ben Gurion University, 84990 Midreshet Ben Gurion, Israel

18:30-19:30 Dinner

Evening Program

Wednesday, October 29, 2008

9:00-10:30 ISES – Israel Session

1. *The Israeli Government's Vision of Research and Development in Renewable Energy*

Dr. Shlomo Wald

Chief Scientist, Israel Ministry of National Infrastructures

2. *The Better Place Electric Vehicle Project*

Dr. Dan Weinstock

Better Place

3. *The electric car: solution or setback for the environment?*

Sigal Shusterman and **Prof. Avi Kribus**

Tel Aviv University

4. *Winflex wind turbine technology*

Dr. Vladimir Kliatzkin

CTO, Unibatt Ltd.

Closing Remarks – Prof. David Faiman

10:30-11:00 Coffee Break

11:00-12:00 ISES General Meeting – Members only



12:30-14:00 *Lunch – Dining room, High school for environmental studies*

14:00 – 18:00 **First French-Israeli Solar Energy Workshop – Day One**
(open to everyone – but requires separate registration)

Festive dinner

20:00-22:30 **Concert – Giacomo Meyerbeer**, Performed by Rotem Sivan (Soprano) and (Yonatan Zak)