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PROCEEDINGS OF THE 9TH SEDE BOQER SYMPOSIUM ON SOLAR ELECTRICITY PRODUCTION

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Editor

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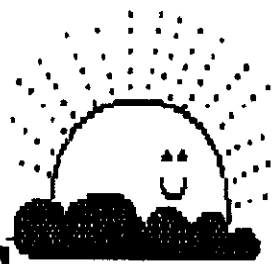

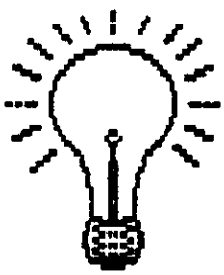

INTRODUCTION

The 9th Sede Boqer Symposium on Solar Electricity Production benefited from an unusually large number of overseas delegates thanks to the ISES World Solar Congress that had taken place in Jerusalem all of the preceding week.

This year we were again privileged to hear three key-note presentations. Professor Jacob Ishay, of Tel Aviv University, amazed us all regarding his discoveries about the photoelectrical properties of hornets. The resulting discussion (transcribed, as is our custom at these symposia, at the end of Prof. Ishay's paper) illustrates the great need that everyone felt for closer collaboration between biologists and specialists in the physical sciences. This point was explicitly emphasized by the chief scientist of the Ministry of Science, Professor Mordechai Bishari.

Professor Peter Landsberg, from the University of Southampton, UK, refreshed us all with, what may best be described as a "virtuoso performance" in his review of fundamental limits to the efficiency of photovoltaic cells. What could very easily have degenerated into a mess of mathematics was delivered with great wit and outstanding clarity, in a manner that could be understood by all.

The third key-note presentation was given by Professor Serdar Sariciftci, from the Johannes Kepler University of Linz, Austria. As a fitting final key-note lecture at the last Sede Boqer Symposium of the 1900s, Serdar reviewed the exciting new field of polymer solar cells that he has done so much to pioneer. In fact, as Dr. Morton Prince remarked, it is extremely encouraging that polymer cells with efficiencies of around 1% have already been achieved so early into this research program: With silicon, things took considerably longer.

At the end of Professor Sariciftci's presentation an historic event occurred outside the conference hall: The Ben-Gurion National Solar Energy Center's 23 m parabolic dish, PETAL (Paraboloidal Energy Transformer and Astrophysics Laboratory), was pointed at the sun for the very first time. Since no receiver was attached, one could clearly see a bright luminous patch at the focus (just visible in Fig.1, which records the event on p.146 of these proceedings) as fine dust particles in the air were illuminated at an intensity equivalent to thousands of suns.

Lastly, it is my pleasant duty to acknowledge the sponsors of this year's symposium. They were: The Academic Study Group on Israel and the Middle East, Ben-Gurion University of the Negev, The Blaustein International Center for Desert Studies, Greenstar Foundation, The Israel Power Systems Chapter of the Institute of Electrical and Electronic Engineers, The Israel Section of the International Solar Energy Society, the Israel Ministry of National Infrastructures and the Israel Ministry of Science. On behalf of all participants I would also like to thank the staff of the Ben-Gurion National Solar Energy Center (David Berman, Dov Bokovza, Yael Cohen, Shoshana Dann, Shlomo Kaballo, Vladimir Melnichak and Kathi Pearlmutter) and my wife, Ofra, for their many personal touches which contributed to the comfort of our guests and the smooth running of the symposium.

David Faiman
Sede Boqer, October 1999.

POSTCRIPT

While preparing the final manuscript of these proceedings for printing, news arrived of the tragic death of our colleague Kurt Weiser. I feel sure that I express the sentiments of all attendees of the Sede Boqer Symposia that Kurt's presentations will be sorely missed. His final contribution to this series appears on p.153.

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