PROCEEDINGS OF THE SIXTH SEDE BOQER SYMPOSIUM ON SOLAR ELECTRICITY PRODUCTION

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Editor

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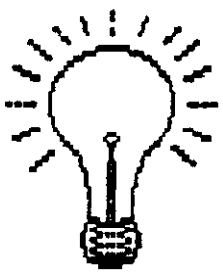

INTRODUCTION

The emphasis of the 6th Sede Boqer Symposium on Solar Electricity Production was on photovoltaics (pv). The reason for this was partly to counter-balance the heavy solar-thermal bias of the previous symposium in this series but mainly to enable the extensive Israeli pv community to express itself and to exchange ideas. Being a country without a pv industry it is not surprising that most of the contributions concentrated on research aspects of the field. In this respect it is satisfying that this important subject has not been neglected, for lack of industrial funding, by the various universities and research institutes around the country. Dr. Avraham Arbib, Head of R&D at the Ministry of Energy and Infrastructure, emphasized that the Ministry conducts a policy to fund research into novel ideas in pv rather than mere improvements to existing technologies - however necessary and important the latter kind of work clearly is. Indeed, the Ministry had previously engaged Dr. Amnon Manor to conduct a review of what constitutes the pv community in Israel and what everyone is doing. A summary of this review was presented and is included in these proceedings.

This year's key-note speakers were Stephen Kaneff of the Australian National University, Canberra and Michael Grätzel of the École Polytechnique Fédéral de Lausanne. Prof. Kaneff, designer of the world's largest (400 m^2) paraboloidal solar concentrator, one of which is due to be erected at Sede Boqer during 1995, spoke on the potential of such dishes for photovoltaic and other purposes. His presentation gave rise to some vigorous discussion which was tape-recorded and is appended, in edited form, to the text of his lecture. Prof. Grätzel presented an overview of his exciting recent invention, the "nanocell". For an audience familiar with the physics of pn junctions perhaps the most fascinating revelation in Prof. Grätzel's lecture was the fact that nanocells, like living plants (to which he is fond of comparing them), contain no built-in electric field! The discussion which followed Prof. Grätzel's lecture is also included in these proceedings. Sadly, our third invited speaker, Keith Barnham of Imperial College, London, was prevented from attending the symposium by tragic circumstances. Despite BGU Rector Prof. Finger's kind expression of everyone's wishes for Mrs. Barnham's speedy recovery, fate had decided otherwise. This volume is dedicated to her memory.

Lastly it is my pleasant duty to acknowledge the sponsors of this year's symposium. They are: The Blaustein International Center for Desert Studies; The Israel Section of the International Solar Energy Society; The Ministry of Energy and Infrastructure and Solel Solar Industries Ltd. I should also like to give special thanks to the technical staff of the Ben-Gurion National Solar Energy Center (Danny, David, Genia, Mark, Rachel, Ruthy and Yaffa) for their countless personal touches which contributed to the comfort of the participants and the smooth running of the symposium.

David Faiman
Sede Boqer, January 1995.

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