



A. Solar Building Design

- 1. Energy Effizient Cities Competition – Wolfhagen:**
Kai Morgenstern • Fraunhofer IBP, Sebastian Herkel • Fraunhofer ISE
- 2. Energy Strategy for the Ecological Residential District Oberzwehren:**
Kai Morgenstern • Fraunhofer IBP
- 3. Active Solar Façades:** Tilmann Kuhn, Claudio Ferrara • Fraunhofer ISE
- 4. MULTIELEMENT - PV Elements in Building Services Engineering:**
Dr. Norbert Henze • Fraunhofer IWES
- 5. Solar Heating and Cooling with absorption chiller and latent heat storage:**
Prof. Dr. Christian Schweigler • ZAE Bayern
- 6. Production Technology for Vacuum Insulation Glass:** Dr. Helmut Weinläder • ZAE Bayern
- 7. Membrane Constructions for Increasing the Energy Efficiency of Buildings:**
Dr. Helmut Weinläder • ZAE Bayern
- 8. Vacuum Insulation for Buildings in the Practical Application:**
Dr. Helmut Weinläder • ZAE Bayern
- 9. Highly Insulating Window and Facade Systems:** Dr. Helmut Weinläder • ZAE Bayern
- 10. Seasonal Shading:** Gunter Rockendorf • ISFH



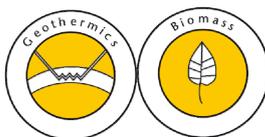
B. Wind Energy & Ocean Energy

- 1. Ocean Energy Technology:** Jochen Bard • Fraunhofer IWES
- 2. Wind Power Management System - Wind Power Forecast:**
Dr. Bernhard Lange, Reinhard Mackensen • Fraunhofer IWES
- 3. Small Wind Turbines for Rural Electrification:**
Paul Kühn, Berthold Hahn • Fraunhofer IWES



C. Concentrated Solar Technologies

- 1. DESERTEC – Solar Power from the Desert:**
Dr. Franz Trieb, Carsten Hoyer-Klick • DLR
- 2. Sustained Market Entry of Solar Thermal Power Plants:** Klaus Hennecke • DLR
- 3. Precise Dual-Axis Tracking for CPV Systems:** Olivier Stalter • Fraunhofer ISE
- 4. Quality Control of Concentrating Collector Components:**
Dr. Werner Platzer • Fraunhofer ISE
- 5. Design Concept for Medium Temperature Parabolic Trough Collector:**
Anna Heimsath • Fraunhofer ISE



D. Geothermal Plants & Biomass

- 1. In situ geothermal laboratory Groß Schönebeck:** Dr. Ernst Huenges • GFZ
- 2. Biogas Plants for Decentralised Power Supply:**
Dr. Bernd Krautkremer • Fraunhofer IWES
- 3. Biomass Power Plant:** Prof. Dr. Hartmut Spliethoff, Dr. Matthias Gaderer • ZAE Bayern
- 4. Enerbiom – Sustainable production of energy biomass:** Beate Faßbender • IZES



E. Photovoltaics

- 1. High-efficiency solar cells on n-type silicon:**
Dr. Stefan Glunz • Fraunhofer ISE, Dr. Carsten Hampe • ISFH
- 2. On laminate laser-soldering of rear-contact solar cells:** Dr. Marc Köntges • ISFH
- 3. Module Technology for Back-contact Solar Cells:** Dr. Harry Wirth • Fraunhofer ISE
- 4. Crystalline silicon thin-film solar cells on foreign substrates:**
Prof. Dr. Christoph Brabec, Richard Auer • ZAE Bayern
- 5. CIS Thin-Film Photovoltaics:** Claudia Brusdeylins • ZSW, Erik Zürn • HZB
- 6. Flexible Solar Cells:** Dr. Roland Würz • ZSW, Dr. Christian A. Kaufmann • HZB
- 7. Science Meets Industry – Technology Transfer at the PVcomB:**
Dr. Rüdiger Schlatmann • HZB
- 8. Concentrator Solar Cells:** Dr. Andreas Bett, Dr. Frank Dimroth, Fraunhofer ISE
- 9. Organic photovoltaics: IR-thermography of polymer solar cells:**
Prof. Vladimir Dyakonov • ZAE Bayern
- 10. Organic Photovoltaics: Tandem Solar Cells:** Dr. E. Ahlswede • ZSW
- 11. Organic photovoltaics: Elucidation of important recombination loss mechanisms:** Prof. Vladimir Dyakonov, Prof. Brabec, R. Auer, • ZAE Bayern
- 12. The solar greenhouse:** Ulrich Bruch • IZES
- 13. Qualification of Technical Components for Different Climates – Challenge for PV-Module Design and Testing:** Michael Köhl • Fraunhofer ISE



F. Heating and Cooling

- 1. Solar Polygeneration with Concentrating Collectors:**
Klaus Hennecke • DLR, Anton Neuhäuser, Werner Platzer • Fraunhofer ISE
- 2. High efficiency flat plate collector based on a selective double-glazing:**
Gunter Rockendorf • ISFH
- 3. Solar District Heating „Ackermannbogen Munich“:**
Wolfgang Schölkopf • ZAE Bayern
- 4. Underground Thermal Energy Storages at the German Parliament Buildings:**
Dr. Ernst Huenges • GFZ, Manfred Reuß • ZAE Bayern
- 5. Shallow geothermal:** Manfred Reuß • ZAE Bayern
- 6. Solar Air-Conditioning:** Dr. Peter Schossig, Dr. Hans-Martin Henning, Sebastian Herkel • Fraunhofer ISE, Klaus Hennecke • DLR, Prof. Dr. Christian Schweigler • ZAE Bayern
- 7. Keep Cool II – From cooling to sustainable summer comfort:**
Barbara Dröschel • IZES
- 8. Monitoring and Exergetic Evaluation of Heating and Cooling Concepts with Geothermal Energy:** Doreen Kalz • Fraunhofer ISE



G. System Technology

- 1. Smart Grids:** Christian Sauer, Dr. Christof Wittwer • Fraunhofer ISE
- 2. Bidirectional Energy Management Interface – BEMI:**
Dr. David Nestle, Jan Ringelstein • Fraunhofer IWES
- 3. Combined Power Plant with 100% Renewables:**
Dr. Kurt Rohrig, Reinhard Mackensen • Fraunhofer IWES
- 4. Power Electronics:** Prof. Dr. Peter Zacharias • Uni-Kassel/ KDEE, Philipp Strauß • Fraunhofer IWES, Prof. Dr. Bruno Burger • Fraunhofer ISE, Bernd Engel • SMA
- 5. Grid connected PV- battery-system Sol-ion:**
Hans-Dieter Mohring, Andreas Jossen • ZSW, Martin Braun, Markus Landau • Fraunhofer IWES, Armin Schmiegel • Voltwerk Electronics
- 6. Rural Electrification with Hybrid Systems:** Markus Landau • Fraunhofer IWES
- 7. Hybrid Power Plant:** Florian Leucht, Josef Kallo • DLR

Poster Session

Renewable Energy Research for Global Markets • 24. / 25. November 2009 • Berlin



FVEE ForschungsVerbund
Erneuerbare Energien
Renewable Energy Research Association



H. Energy Storage

1. **Battery System Technology for Renewable Energy Systems:** Simon Schwunk, Dr. Matthias Vetter • Fraunhofer ISE, Dr. Andreas Jossen • ZSW
2. **ISET-LAB - Simulation Software for Lead-Acid Batteries:** Peter Caselitz, Dr. Aleksandra-Saša Bukvić-Schäfer, Fraunhofer IWES • Fraunhofer IWES
3. **Storage of Solar Energy in Liquid Desiccants for Air-Conditioning:** Dr. Andreas Hauer, Dr. Hans-Peter Ebert • ZAE Bayern
4. **Electrochemical Storage - Redox Flow Battery:** Dr. Matthias Rzepka • ZAE Bayern
5. **High-Temperature Heat Storage for the Dispatchability of Renewable Energy:** Dr. Stefan Zunft • DLR
6. **Power-to-Gas:** ZSW
7. **Electrical Energy Storage:** Dr. Andreas Jossen • ZSW
8. **Redox Flow Batteries – Electric Storage Systems for Regenerative Energy:** Dr. Tom Smolinka • Fraunhofer ISE
9. **Cold storage with Phase change slurries:** Dr.-Ing. Peter Schossig • Fraunhofer ISE



I. Mobility and Fuel Production

1. **Hydrogen from Solar Thermochemical Cycles:** Dr. Christian Sattler • DLR
2. **Small Traction with Fuel Cells:** Ulf Groos • Fraunhofer ISE
3. **Efficient Mobility – How to green a Vehicle Fleet?** Dominik Noeren • Fraunhofer ISE
4. **Fuelling Future Transport via Hydrogen Stations:** Dr. Stefan Zunft, Dr. Antje Wörner • DLR
5. **Effects of electric cars on power generation, distribution and CO₂ emissions in Germany:** Juri Horst • IZES
6. **Solar Fuels:** Dr. Sebastian Fiechter • HZB
7. **Hydrogen from Renewable Energy Sources:** Dr. Tom Smolinka • Fraunhofer ISE



J. Fuel Cells

1. **Solid Oxide Fuel Cell in Jülich:** Dr. Robert Steinberger-Wilckens • Jülich
2. **Direct Methanol Fuel Cell for light traction:** Jürgen Mergel, Dr. Bernd Emonts • Jülich
3. **Reformer Fuel Cell System For Bioethanol:** Ulf Groos • Fraunhofer ISE
4. **High-temperature Polymer Electrolyte Fuel Cell:** Dr. Bernd Emonts • Jülich, PD Dr. Werner Lehnert, Prof. Dr. Ralf Peters
5. **Callux - Practical Tests for Fuel Cells in a Domestic Setting:** Daniel Schloz, Marc-Simon Löffler, Frank Musiol • ZSW
6. **Imaging of Fuel Cells:** Dr. Joachim Scholta • ZSW, Dr. Ingo Manke • HZB
7. **Direct Carbon Fuel Cell:** Dr. Matthias Rzepka • ZAE Bayern
8. **Fuel cell systems for aircraft applications:** Prof. Dr. Andreas Friedrich • DLR
9. **Fuel Cell Systems for Portable Applications:** Prof. Dr. Andreas Friedrich • DLR
10. **SOFC Cell and System Development at DLR:** Prof. Dr. Andreas Friedrich • DLR
11. **Pilot operation of a high temperature fuel cell (SOFC) with coal mine gas:** Dr. Bodo Groß • IZES



K. Capacity Building

1. **Renewable Energies Knowledge Transfer Network:** Dr. Kurt Rohrig • Fraunhofer IWES
2. **QUARZ – Test and Qualification Center for CSP Technologies:** Dr. Björn Schiricke • DLR
3. **NILS - Solar Energy to take part in:** Dr. Roland Goslich • ISFH
4. **Competence Centre Thin-Film- and Nanotechnology for Photovoltaics Berlin (PVcomB):** Erik Zürn, Dr. Rudger Schlatmann • HZB



L. Technological Impact Assessment

1. **Global Assessment of Renewable Energy Potentials and Energy Modelling - Renewable Energy Mix:** Daniel Stetter • DLR
2. **Working Group on Renewable Energy - Statistics - How to provide a database satisfying political as well as statistical needs:** Marion Ottmüller, Dr. Frank Musiol, Andreas Püttner, Ulrike Zimmer • ZSW
3. **Wind Power Prediction using Recurrent Neural Networks:** Martin Felder, Anton Kaifel • ZSW, Alex Graves • TU München