

27 April 2015, Monday, CCC Kemal Kurdas Hall

08:30 - 09:30	Registration
09:40 - 10:30	Opening Talks <i>Chairperson: Raşit TURAN</i>
09.40 – 10.00	Raşit TURAN GÜNAM, METU
10.00 – 10.10	Ahmet ACAR President, METU
10.10 – 10.30	Ramazan USTA Yenilenebilir Enerji Genel Müdürlüğü, Genel Müdür Yardımcısı

10:30 – 11:00 Coffee break, Poster session

Session 2: Crystalline Silicon Photovoltaic Technologies

Chairperson: Çiğdem ERÇELEBI

11:00 - 11:30	Stefan GLUNZ (Invited) Fraunhofer ISE, Germany “Crystalline Silicon Photovoltaics - From the past to the future”
11:30 – 12.00	Giso HAHN (Invited) University of Konstanz, Germany “Regeneration of BO-related defects: towards stable high efficiency p-type c-Si solar cells”
12:00 - 12.20	Fırat ES GÜNAM, Turkey “Metal Assisted Texturing of Crystalline Si”

12:20 – 14:00 Lunch

13:00 - 14:00 Tutorial: Basics of Photovoltaic Energy Conversion, Canan VARLIKLI, EÜGEE

13:00 - 14:00 Poster Session 1

Session 3a: Silicon Heterojunction Technologies

Chairperson: Lütfi ÖZYÜZER

14:00 - 14:30	Stefaan De WOLF (Invited) EPFL, Switzerland “Silicon Heterojunction Solar Cells: Status and Perspectives”
14:30 - 14:50	Ergi DÖNERÇARK IMEC, Belgium and GÜNAM, Turkey “Surface Preparation Methods and Post Annealing Effects on HIT Solar Cells without Rear Surface Field Effect”
14:50 - 15:10	Ayşe SEYHAN Niğde University, Turkey “High Efficient Silicon Heterojunction with Intrinsic Thin-Layer Solar Cell”
15:10 – 15:30	Pradyumna MURALIDHARAN Arizona State University, USA “A Kinetic Monte Carlo Study of Defect Assisted Transport in Silicon Heterojunction Solar Cells”

Session 3b: Panel : Problems, Opportunities and Obstacles for Turkish PV Producers, Do National Incentives Work Properly?

Chairperson: Şener OKTİK

14:00 – 15:50

Panel : Participants

Sabahattin ÖZ (Enerji ve Tabii Kaynaklar Bakanlığı)
Osman ÖZBEK (Solar Turk)
Bilal ŞİMŞİR
Şener OKTİK

15:30 – 15:50 Coffee break

Session 4a: PV Modules <i>Chairperson: Stuart IRVINE</i>		Session 4b: SOLARBABA Session: Today and Future of Turkish PV market and Legislations <i>Chairperson: Ateş UĞUREL</i>	
15:50 - 16:20	Harry WIRTH (Invited), Fraunhofer ISE, Germany "Safe Yields from PV power plants"	15:50 - 16:10	Hasan YILDIZHAN, Hatay – Dörtyol, Turkey "The Market Analysis Of Turkey's Photovoltaic Solar Panel Sector"
16:20 - 16:40	Benjamin STRAHM Meyer Burger, Switzerland "Module Integration of Solar Cells with Diverse Metallization Schemes Enabled by Smart Wire Connection Technology"	16:10 – 17:20 (Open Talk)	Ateş UĞUREL Solarbaba, Platform Başkanı "The Facts Of Turkish Solar Market"
16:40 - 17:00	Olgu DEMIRCIOĞLU GÜNAM, Turkey "R&D Project on Optimization of Energy Consumption with Turkish PV Cells to Enhance Sustainable Energy Usage"		
17:00 – 17:20	Murat ALDEMİR GTC, Turkey "Overview of Temperature Coefficients of Monocrystalline Si Photovoltaic Module"		
17:20 – 17:40	Giray KARTOPU Glyndŵr University, UK Fabrication of Monolithic CdTe Modules: Conventional vs. One-Step-Interconnection		

17:40 - 18:40 Poster Session 2

17:40- 20:00 Reception

28 April 2015, Tuesday, CCC-A Hall (a) and CCC-B Hall (b)

Session 1a: Plasmonics and Nanostructures <i>Chairperson: Ivan GORDON</i>		Session 1b: Concentrated Solar Power (CSP) <i>Chairperson: Derek BAKER</i>	
09:00 - 09:30	Miro ZEMAN (Invited), Delft University of Technology, Netherland "Light Trapping in Solar Cells with Thin Absorbers"	09:00 - 09:30	Eduardo Zarza MOYA (Invited) PSA, Spain "Priority R+D topics for STE sector"
09:30 – 9:50	Patrick RUFANGURA METU Northern Cyprus, Cyprus "Polarization Angle Insensitive Dual-Band Perfect Metamaterial Absorber for Solar Cell Applications"	09:30 – 09:50	Vassiliki DROSOU CRES, Greece "EU-SOLARIS: The European Infrastructure for Concentrated Solar Thermal and Solar Chemistry Technologies"
9:50 – 10:10	Zaki SALEH GÜNAM, Turkey and Jenin American University, Palestine "Dependence of Plasmonics Enhancement of Photocurrent in A-Si:H on The Position and Thickness of Spacer Layer"	09:50 - 10:10	Eray UZGOREN METU Northern Cyprus, Cyprus "Water Consumption of Small Scale Wet CSP Systems"
10:10 – 10:30	Alpan BEK GÜNAM, Turkey "Nonlinear Plasmonics for Photovoltaics"	10:10 - 10:30	Nima BONYADI GÜNAM, Turkey "Initial Technical Feasibility Study of A Solar Geothermal Hybrid Electric Power Plant Using A Novel Combined Cycle"

10:30 – 11:00 Coffee break

Session 2a: Thin Film and Thin Crystalline Si Technologies

Chairperson: Mehmet PARLAK

- 11:00 - 11:30 **Stuart IRVINE (Invited),
Glyndŵr University, UK**
“Thin film PV on ultra-thin glass”
- 11:30 - 11:50 **Selçuk YERCI
GÜNAM, Turkey**
“Advanced Light Trapping on Ultra Thin Si”
- 11:50- 12:10 **Mehmet GÜNEŞ
Muğla University, Turkey**
“Metastability Effects Due to Light and
Deionised Water Exposure in N-Type
Microcrystalline Silicon Films Deposited on
Rough Glass Investigated by Photoconductivity
Spectroscopy”
- 12:10 - 12:30 **Aydın TANKUT
GÜNAM, Turkey**
Thin Crystalline Si on Glass
- 12:30 - 12:50 **Bart GEERLIGS (Invited),
ECN, Netherland**
“Developments at ECN on High Efficiency N-
Type Back-Contact Cell and Module
Technology”

Session 2b: City Planning and BIPV

Chairperson: Mete ÇUBUKÇU

- 11:00 - 11:30 **Pınar MENGÜÇ (Invited),
Özyeğin University, Turkey**
“Optics and Buildings”
- 11:30 - 11:50 **Stefan DEWALLEF (Invited),
Soltech, Belgium**
Towards an Active Building Skin: Customized
Photovoltaic Modules
- 11:50 - 12:10 **Mohammad ASKARI,
METU Northern Cyprus, Cyprus**
“CFD Simulation and Experimental
Investigations of Salinity Gradient Solar Pond
Under Northern Cyprus Climate Conditions”
- 12:10 - 12:30 **Burak SEFER
Özyeğin University, Turkey**
“Photovoltaic System Performance Monitoring
and Operational KPI Analysis: A Case Study
Based on Ozyegin University Campus-Wide
Installation”
- 12:30 - 12:50 **Soofia Tahira Elias ÖZKAN
METU, Turkey**
Net-Zero Energy Buildings

13:00- 14:00 Tutorial : Photovoltaic Energy Technologies, Emrah ÜNALAN, METU

13:00 - 14:00 Poster Session 3

12:50 – 14:00 Lunch

Session 3a: EAGER Workshop

Chairperson: Emrah ÜNALAN

- 14:00 - 14:30 **Brian KORGEL (Invited),
University of Texas in Austin, USA**
“Nanomaterials for Energy Generation and
Storage”
- 14:30 - 14:50 **Mozhgan LAKI,
İTÜ, Turkey**
“High Purity Single Walled Carbon Nanotubes
as Transparent Electrode Materials”
- 14:50 - 15:10 **Pantea AURANG
GÜNAM, Turkey**
“Si Nanowires for Energy Applications”
- 15:10 -15:30 **İbrahim Murat ÖZTÜRK
GÜNAM, Turkey**
“Fabrication of Various Metal Nanostructures
with Hole Mask Colloidal Lithography”
- 15:30 - 15:50 **Pelin KÖMÜRCÜ
TOBB University, Turkey**
“Indium Sulphide Sensitized Zinc Oxide
Nanowires for Solar Water Splitting

Session 3b: Şişecam

Chairperson: Aydın TANKUT

- 14:00 - 14:15 **Şener OKTIK
Türkiye Şişe ve Cam Fabrikaları A.Ş. Araştırma ve Teknolojik
Geliştirme Başkanlığı**
“Corporate Research and Technological Development at
ŞİŞECAM”
- 14:15 - 14:45 **Şener OKTIK
Türkiye Şişe ve Cam Fabrikaları A.Ş. Araştırma ve Teknolojik
Geliştirme Başkanlığı**
“Glass and Solar Energy”
- 14:45 - 15:00 **Anıl ÖZEN
Türkiye Şişe ve Cam Fabrikaları A.Ş. Araştırma ve Teknolojik
Geliştirme Başkanlığı**
“Antireflective Coating on Cover Glass for c-Si Photovoltaic
Modules”
- 15:00 - 15:15 **Hürriyet YÜCE
IYTE, Turkey**
“Characterization of VO₂ Films Grown By Magnetron
Sputtering For Thermochromic Applications”
- 15:15 – 15:30 **Mustafa ÜNAL
GÜNAM, Turkey**
“Effect of Aluminium Thickness and Etching Time Of
Aluminium Induced Texturing Process On Soda Lime Glass
Substrates For a-Si:H Solar Cell Applications”
- 15:30 – 15:45 **Seniz TÜRKÜZ
Türkiye Şişe ve Cam Fabrikaları A.Ş. Araştırma ve Teknolojik
Geliştirme Başkanlığı**
“Low-e Coated Glass Products and Approaches in ŞİŞECAM
- 15:45 – 16:00 **M. Ozan ÖZER
Trakya Yenisehir Cam Sanayii A.S**
“Production and Post-Processing of Low-e Coated Glass”

15:50 – 16:00 Coffee break

Session 4a: Measurement, Simulation and Characterization		Session 4b: CdTe:CIGS Thin Film Technologies	
<i>Chairperson: Selçuk YERCI</i>		<i>Chairperson: Gülnur Aygün ÖZYÜZER</i>	
16:00 - 16:30	Dragica VASILESKA (Invited) ASU, USA “Reliability Modelling of CdTe Photovoltaic”	16:00 - 16:30	Atiye BAYMAN (Invited), MiaSole, USA “Advances in CIGS thin film PV Technology at MiaSolé”
16:30 – 16:50	Mete ÇUBUKÇU Ege Uni. Solar Energy Inst., Turkey “Recent Status and Quality Aspects of PV Sector in Turkey”	16:30 – 16:50	Ozan ARI IYTE, Turkey “Growth and Characterization of CdTe Absorbers on GaSAs by MBE For High Concentration PV Solar Cells”
16:50 - 17:10	Ferenc KORSÓS SEMILAB, Hungary “On-the Fly Photoluminescence Techniques in Solar Cell Production”	16:50 - 17:10	B. ÜMSÜR Helmholtz-Zentrum, Germany “Investigation of the Potassium Fluoride Post Deposition Treatment on the CIGSe/CdS Interface using Hard X-ray Photoemission Spectroscopy”
17:10 - 17:30	Martin BUSCH Suragus GMBH, Germany “Non-Contact Thin Film Characterization by Eddy Current Testing Technology”		
17:30 - 18:30 Poster session 4			
17:30 – 20:00 Cocktail			

29 April 2015, Wednesday CCC-A Hall (a) and CCC-B Hall (b)

Session 1a: Organics and Dye Synthesized Cells I		Session 1b: Turkey Uses Solar Energy : Applications, Examples	
<i>Chairperson: Canan VARLIKLİ</i>		<i>Chairperson: Rüştü EKE</i>	
09:00 - 09:30	Niyazi Serdar SARIÇIFTÇI (Invited), Linz University, Austria “Organic and Bio-Organic Molecular Systems for Solar Energy and CO ₂ Conversion”	09:00 - 09:15	Halk Enerji
09:30 - 09:50	Ayşe BEDELOĞLU Bursa TU, Turkey “Flexible Nanocomposite Electrodes Alternative to ITO for Polymer-Based Organic Solar Cell Applications”	09:15 - 09:30	Arıteks
09:50 - 10:10	Halide DIKER EUGEE, Turkey “Synthesis, Characterization And Utilisation of Solution Processable Graphene Oxide Doped PEDOT:PSS as Hole Transport Layer in Organic Solar Cells”	09:30 - 09:45	Hüdaverdi YARAR SEİSO-Genel Müdür Yardımcısı “Solar Energy In Sports Facilities; World’s Biggest Solar Powered Stadium In Antalya City”
10:10 - 10:30	Şerafettin DEMİÇ Selçuk University, Turkey “Surface Modification of CdSeS Nanocrystals For Polymer Hybrid Solar Cells”	09:45 - 10:00	Aygün ALTIPARMAK Ege Orman Vakfı “Güneşten Ormanlar”
		10:00 - 10:15	Süleyman Bedeloğlu Enisolar “OPET Mersin: Bir Akaryakıt Dolum İstasyonunda FVGS Uygulama Örneği”
		10:15 - 10:30	Deniz Selkan POLATKAN Motif Enerji “Güneş Elektriği Değer Zincirinin Önemli Halkaları”

10:30 – 11:00 Coffee break, Poster session

Session 2a: Organics and Dye Synthesized Cells II

Chairperson : Macit ÖZENBAŞ

- 11:00 - 11:30 **Andreas HINSCH (Invited),
Fraunhofer ISE, Germany**
“Development of high efficient, low-cost
perovskite solar cells”
- 11:30 - 11:50 **Mehmet BIBER
Atatürk Üniversitesi, Turkey**
“The Effect of Fabrication Temperature on
Efficiency of Pentacene: PTCDI Solar Cell”
- 11:50 - 12:10 **B. Can KOCAOĞLU
GÜNAM, Turkey**
“Optimization of Electrophoretic Deposition
and Isostatic Compression of Titania
Nanoparticles for Flexible Dye-Sensitized Solar
Cells”
- 12:10 - 12:30 **Kerem Çağatay İÇLİ
GÜNAM, Turkey**
“Parallel Type Dye Sensitized Solar Modules
with Embedded Silver Lines”

Session 2b: “Alternatifenerji.com - Will Solar Design Our Future ?”

Chairperson: Senem GENÇER

- 11:00 - 11:30 **Hakan GÜRSU**
“Future Products”
- 11:30 - 12:00 **Ali TÜRKER
Futuristler Derneği**
“Depoları Olmayan bir Ağ Sadece Yenilenebilir
Enerji Kullanamaz”
- 12:00 - 12:30 **Çetin GÖKSU**

12:30 – 14:00 Lunch

Session 3a: Inorganic Compounds

Chairperson: Alpan BEK

- 14:00 – 14:20 **Fatime Gülşah AKÇA
İYTE, Turkey**
“Structural and Electrical Characterizations of
P-Type Cu_2ZnSnS_4 Absorber Layer Material for
Solar Cells”
- 14:20 – 14:40 **Ergun RIDVAN
İTÜ, Turkey**
“Synthesis and Characterization of
 Cu_2ZnSnS_4/Se_4 Nanoparticle Inks for
Photovoltaic Devices”
- 14:40 – 15:00 **Özge BAYRAKLI
GÜNAM, Turkey**
“Device Measurements and Analysis of Ag-Ga-
In-Te Based Thin Film Heterojunction Diode”

Session 3b: Field Performance

Chairperson: Bülent AKINOĞLU

- 14:00 - 14:30 **Rüştü EKE
Muğla Üniversitesi, Türkiye**
“PV outdoor tests and 12 years of Muğla
experiences”
- 14:30 - 14:50 **Talat ÖZDEN,
GÜNAM ve Gümüşhane Üniversitesi,
Türkiye**
“Outdoor Efficiency Analyses And Comparison
Of On-Grid Cdte And Amorphous Silicon Thin-
Film Pv Systems For One Year In Ankara,
Turkey-Preliminary Results”
- 14:50 - 15:10 **Elham JAHANI
Sustainable Environment and Energy
Systems METU, Türkiye**
“Assessment Of Solar Data Prediction Models
For South East Iran”

Closing Session CCC A

- 15:30 - 16:00 **Ayşe Çiğdem ERÇELEBİ,**
Vice President, METU
- 16:00 – 16:30 **Raşit TURAN**
GÜNAM, METU