

ICOT 2018 – CONFERENCE SCHEDULE

Monday Jan. 29	Tuesday Jan. 30		Wednesday Jan. 31		Thursday Feb. 1				
Arrival	8:30-9:00	Opening Ceremony		8:30-9:30	Chabinye (PL2)		9:00-10:00	Toshima (PL3)	
	9:00-10:00	Grunlan (PL1)		9:30-9:50	Shevlin (S2)				
	10:00-10:20	Marx (S1)		10:00-10:20	García-Cañadas (A10)	D'Agosta (B10)	10:10-10:30	Laux (A20)	Ito (B20)
	10:20-10:50	Coffee Break		10:20-10:50	Coffee Break		10:30-11:00	Coffee Break	
	10:50-11:20	Segalman (I1)	Kawai (I2)	10:50-11:20	Kemerink (I7)	Shuai (I8)	11:00-11:30	Xu (I13)	Kim (I14)
	11:20-11:40	Schendel (A1)	Whittaker-Brooks (B1)	11:20-11:40	Jang (A11)	Liang (B11)	11:30-11:50	Du (A21)	Anno (B21)
	11:40-12:00	Han (A2)	Abargues (B2)	11:40-12:00	Yuan (A12)	Zhu (B12)	11:50-12:10	Menon (A22)	Marin (B22)
	12:00-12:20	BK Lee (A3)	Fujigaya (B3)	12:00-12:20	Kroon (A13)	Abdalla (B13)	12:10-12:30	Yan (A23)	Rutkis (B23)
	12:20-12:40	Wijeratne (A4)	CS Lee (B4)	12:20-12:40	Andrei (A14)	Dalkiranis (B14)	12:30-12:50	Kanahashi (A24)	Pudzys (B24)
	12:40-13:00	Selezneva (A5)	Zhao (B5)	12:40-13:00	Zapata-Arteaga (A15)	Kandhasamy (B15)	12:50-13:10	Qu (A25)	Chen (B25)
	13:00-14:30	Lunch break		13:00-14:30	Lunch break		13:10-14:30	Lunch break	
	14:30-15:00	Blackburn (I3)	Pflaum (I4)	14:30-15:00	Katz (I9)	Di (I10)	14:30-15:00	Yee (I15)	Zotti (I16)
	15:00-15:20	Krahl (A6)	Culebras (B6)	15:00-15:20	Wan (A16)	Kojima (B16)	15:00-15:20	Yang (A26)	Miyazaki (B26)
	15:20-15:40	Fenwick (A7)	Horike (B7)	15:20-15:40	Muñoz-Espí (A17)	Kiyota (B17)	15:20-15:40	Goñi (A27)	Xu (B27)
	15:40-16:00	Jiao (A8)	Nakano (B8)	15:40-16:00		Rösch (B18)	15:40-16:00	Massetti (A28)	Tkachov (B28)
	16:00-16:30	Coffee Break		16:00-16:30	Coffee Break		16:00-16:30	Coffee Break	
	16:30 h Registration	16:30-16:50	Kumar (A9)	Nonoguchi (B9)	16:30-16:50	Mori (A19)	Jurado (B19)	16:30-17:00	Agrait (I17)
	16:50-17:20	Statz (I5)	Müller (I6)	16:50-17:20	Fabiano (I11)	Campoy-Quiles (I12)	17:00-17:30	Closure	
18:00 h Welcome Reception (with special luthier demonstration)	17:20-19:00	Poster session I		17:20-19:00	Poster session II				
	19:00-22:00	Tourist visit		20:00-23:30	Conference Banquet				

ICOT 2018 – Program

Monday, January 29, 2018

16:30–18:00	Registration
18:00–21:00	Welcome Reception <i>Location: ADEIT Terrace</i> During the Welcome Reception there will be a live demonstration by the guitar luthier Vicente Carrillo, who will show us how a classic guitar is built.

Tuesday, January 30, 2018

8:30–9:00	Opening Ceremony
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Chair: Michael L. Chabinyk

9:00–10:00	PL1	PLENARY LECTURE Jaime C. Grunlan (Texas A&M Univ., USA) "High Power Factor, Completely Organic Thermoelectric Nanocoatings for Flexible Films and Textiles"
10:00–10:20	S1	Hans-W. Marx (Linseis, Germany) "Measurement System for Thermophysical Properties of Thin Films in a Broad Temperature Range"
10:20–10:50	Coffee Break	

Room A

Chair: Alejandro Goñi

Room B

Chair: Shannon Lee

10:50–11:20	I1	INVITED LECTURE Rachel A. Segalman (UCSB, USA) "Increasing the Power Factor of PEDOT:PSS through Selective Blending of Protic and Aprotic Ionic Liquids"	I2	INVITED LECTURE Tsuyoshi Kawai (NAIST, Japan) "Stable n-type Single Walled Carbon Nanotubes with New Organic Doping Reagents for Future Thermoelectric Conversion"
11:20–11:40	A1	Verena Schendel (KIT, Germany) "Nanostructured Organic Thermoelectrics: PEDOT Nanowires for Printed Devices"	B1	Luisa Whittaker-Brooks (Univ. Utah, USA) "Manipulating the Thermoelectric and Spin Properties of Polymeric Systems"
11:40–12:00	A2	Shaobo Han (Linköping Univ., Sweden) "Thermoelectric Polymer Aerogels for Pressure–Temperature Sensing Applications"	B2	Rafael Abargues (Univ. Valencia, Spain) "In-situ Synthesized Conducting Nanocomposite: A Step Towards Printable Polymer Thermoelectrics"
12:00–12:20	A3	Byeong-Kyu Lee (Univ. Ulsan, South Korea) "Great Enhancement of Photocatalytic and Photoelectrochemical Water Splitting Applications of Bismuth Vanadate with Maximized Interfacial Coupling with RGO"	B3	Tsuyohiko Fujigaya (Kyushu Univ., Japan) "Study of Stability Mechanism of Air-Stable n-type Single-walled Carbon Nanotube Films Doped with Benzimidazole Derivative"
12:20–12:40	A4	Kosala Wijeratne (Linköping Univ., Sweden) "PEDOT–PSS Electrodes for Thermogalvanic Cells"	B4	Chang-Soo Lee (Chungnam Natl. Univ., South Korea) "Mechanically Optimized Design for the Reversible Self-Bending Soft Microstructure"
12:40–13:00	A5	Ekaterina Selezneva (Univ. Cambridge, UK) "An Apparatus for Accurate Measurements of Thermal Conductivity"	B5	Dan Zhao (Linköping Univ. Sweden) "Ionic Thermoelectric Effect and Devices"
13:00–14:30	Lunch Break			

Room A

Chair: Rachel A. Segalman

Room B

Chair: Luisa Whittaker-Brooks

14:30–15:00	I3	INVITED LECTURE Jeffrey Blackburn (NREL, USA) "Large n- and p-Type Thermoelectric Power Factors from Highly Enriched Semiconducting Single-Walled Carbon Nanotube Networks"	I4	INVITED LECTURE Jens Pflaum (Uni Würzburg, Germany) "Organic Metals: Potential Candidates for Thermoelectrics"
15:00–15:20	A6	Fabian Krahl (Aalto Univ., Finland) "Thermal Conductivity in Layer-Engineered Inorganic–Organic Thin Films"	B6	Mario Culebras (Univ. Limerick, Ireland) "Carbon-Based Materials and Nanocomposites for Thermoelectric Applications"
15:20–15:40	A7	Oliver Fenwick (QMUL, UK) "Morphological Tuning of Thermal Conductivity in Halide Perovskite Thin Films"	B7	Shohei Horike (Kobe Univ., Japan) "Highly Stable n-Type Carbon Nanotubes via Simple Vinyl Polymer Doping for Flexible Thermoelectric Generators"
15:40–16:00	A8	Fei Jiao (Linköping Univ., Sweden) Ionic Thermoelectric Paper	B8	Motohiro Nakano (NAIST, Japan) "Enhancing the Thermoelectric Properties of Single-walled Carbon Nanotubes by Polyelectrolytes"
16:00–16:30	Coffee Break			
16:30–16:50	A9	Pawan Kumar (IMRE, Singapore) "Probing Energy-Dependent Scattering in CuTe:PEDOT Hybrid Thermoelectric Films"	B9	Yoshiyuki Nonoguchi (NAIST, Japan) "Dual Mode Thermoelectric Transport in a Semiconducting Carbon Nanotube Film"
16:50–17:20	I5	INVITED LECTURE Martin Statz (Univ. Cambridge, UK) "On the Manifestation of Electron–Electron Interactions in the Thermoelectric Response of Semicrystalline Conjugated Polymers with Low Energetic Disorder"	I6	INVITED LECTURE Christian Müller (Chalmers Univ. Technol., Sweden) "Heat Harvesting Thermoelectric Textiles"

Poster Session I

A Best Poster Award will be sponsored by Nature Publishing Group

Tourist Visit

Wednesday, January 31, 2018

Chair: Jaime C. Grunlan

08:30–09:30	PL2	PLENARY LECTURE Michael L. Chabinyc (UC Santa Barbara, USA) "Thermoelectric Properties of Organic Polymers"
09:30–09:50	S2	Stephen Shevlin (Associate Editor of <i>Nature Materials</i>) "Publishing in Nature Research Journals"
09:50–10:00	Short break for room splitting	

Room A

Chair: Kawai Tsuyoshi

Room B

Chair: Mariano Campoy-Quiles

10:00–10:20	A10	Jorge García-Cañadas (Univ. Jaume I, Spain) "More than 2 Times Improvement in the Power Factor of Thermoelectric Films using Liquid Electrolytes"	B10	Roberto d'Agosta (Centro Joxe Mari Korta, Spain) "Ab Initio Modelling of Thermoelectric Transport in Simple Polymers"
10:20–10:50	Coffee Break			
10:50–11:20	I7	INVITED LECTURE Martijn Kemerink (Linköping Univ., Sweden) "Morphology Control and Density of States Engineering Give Very High Seebeck Coefficients in Organic Thermoelectric Blends"	I8	INVITED LECTURE Zhigang Shuai (Tsinghua Univ., China) "Computational Design of Thermoelectric Polymers with Large Figure of Merits"
11:20–11:40	A11	Jaegyung Jang (Seoul National Univ., South Korea) "Water-Resistant Polymer Organic Thermoelectric Devices"	B11	Ziqi Liang (Fudan Univ., China) "Development of n-Type Metal Nonowire/Polymer Thermoelectric Nanocomposites with Large Power Factor"
11:40–12:00	A12	Dafei Yuan (CAS, China) "Efficient Solution-Processed n-Type Small-Molecule Thermoelectric Materials Achieved by Precisely Regulating Energy Level of Organic Dopants"	B12	Xiaozhang Zhu (CAS, China) "Efficient Solution-Processed n-Type Small-Molecule Thermoelectric Materials Achieved by Precisely Regulating Energy Level of Organic Dopants"
12:00–12:20	A13	Renee Kroon (Chalmers Univ. Technol., Sweden) "Polar Side Chains Enhance Processability, Electrical Conductivity, and Thermal Stability of a Molecularly p-Doped Polythiophene"	B13	Hassan Abdalla (Linköping Univ., Sweden) "Coulomb Interactions Dominate Charge and Energy Transport in Organic Field Effect Transistors"
12:20–12:40	A14	Virgil Andrei (HU Berlin, Germany) "Multi-Layering in Thin Film Organic Thermoelectrics: The Hidden Gem"	B14	Gustavo G. Dalkiranis (UAB, Spain) "In-Plane Thermal Conductivity of Organic Films using the 3 ω -Volklein Method"
12:40–13:00	A15	Osnat Zapata-Arteaga (ICMAB-CSIC, Spain) Optimization of Polymer Thermoelectrics via Doping Gradient	B15	Sathiyaraj Kandhasamy (NTNU, Norway) "Molten Carbonate Electrolyte Based Thermocells for High Temperature Waste Heat Recovery hexylthiophene) by Regulating the Molecular Structure"
13:00–14:30	Lunch Break			

Room A

Chair: Jens Pflaum

Room B

Chair: Roberto D'Agosta

14:30–15:00	I9	INVITED LECTURE Howard Katz (John Hopkins Univ., USA) "Polymer-Dopant Synergies for Increased Hole and Electron Contributions to Thermoelectric Power Factor"	I10	INVITED LECTURE Chong-an Di (CAS, China) "Electric Field Modulations Assisted Development of High Performance n-Type Organic Thermoelectric Materials"
15:00–15:20	A16	Kening Wan (Queen Mary Univ. London, UK) "Flexible Self-powered Sensors Using Organic Thermoelectric Effect"	B16	Hirota Kojima (NAIST, Japan) "Recent Progress on Understanding the Origin of Giant Seebeck Effect in Organic Small Molecules"
15:20–15:40	A17	Rafael Muñoz-Espí (Univ. Valencia, Spain) "Conducting Polymer Nanoparticles by Miniemulsion Polymerization: Pros and Cons for Thermoelectric Applications"	B17	Yasuhiro Kiyota (Tokio Inst. Technol., Japan) Low-Temperature Characteristics of a Thermoelectric Generator using Organic Charge-Transfer Salts
15:40–16:00			B18	Andres Rösch (KIT, Germany) "Print Layout Design for Roll-to-Roll Produced Thermoelectric Generators"
16:00–16:30	Coffee Break			
16:30–16:50	A19	Takao Mori (NIMS, Japan) "Hybrid Effect for Thermoelectric Enhancement and Development of Flexible Modules"	B19	José Piers Jurado (ICMAB-CSIC, Spain) "Organic Solar Thermoelectric Generators"
16:50–17:20	I11	INVITED LECTURE Simone Fabiano (Linköping Univ., Sweden) "N-doped Conducting Polymers for Thermoelectrics"	I12	INVITED LECTURE Mariano Campoy-Quiles (ICMAB-CSIC, Spain) "Simultaneous Determination of the Thermal Conductivity and Thermal Boundary Resistance in Supported Thin Organic Films"

Poster Session I

A Best Poster Award will be sponsored by Nature Publishing Group

17:20–19:00	Poster Session I A Best Poster Award will be sponsored by Nature Publishing Group			
20:00–23:30	Conference Banquet Location: Hotel Astoria			

Thursday, February 1, 2018

Chair: Xavier Crispin

09:00–10:00	PL3	PLENARY LECTURE Naoki Toshima (Tokio Univ. of Science, Japan) "Organic Hybrid Thermoelectric Materials Involving Nanomaterials"
10:00–10:10	Short break for room splitting	

Room A

Chair: Jorge García-Cañada

Room B

Chair: Emiliano Bilotti

10:10–11:30	A20	Edith Laux (HES-SO, Switzerland) "Temperature Dependence of Seebeck Coefficient in Ionic Liquids"	B20	Masahiro Ito (Tokio Univ. of Sci., Japan) "Modulation of thermoelectric of PEDOT/PSS by carrier injection with ferroelectrics"
10:30–11:00	Coffee Break			
11:00–11:30	I13	INVITED LECTURE Wei Xu (CAS, China) "Promising Polymeric Thermoelectric Thin Films of Poly(Ni-ethylenetetra-thiolate) and Polythiophene Prepared by Electrochemical Deposition"	I14	INVITED LECTURE Daegun Kim (Pohang Univ. of Sci. & Technol., South Korea) "Heat-Sink-Free Flexible Organic Thermoelectric Generator Vertically Operating with Chevron Structure"
11:30–11:50	A21	Yong Du (Shanghai Inst. of Technol., China) "Flexible PEDOT:PSS & Polypyrrole nanoparticles Co-coated Cotton Fabric Thermoelectric Films"	B21	Hiroaki Anno (Tokyo Univ. of Science, Japan) In-Plane Thermoelectric Properties of Hybrid Films Consisting of a Nano Titanium Disulfide, Conducting Polymer PEDOT-PSS, and Carbon Nanotubes
11:50–12:10	A22	Akanksha K. Menon (Georgia Tech, USA) "Metallo-Organic Polymers and Devices for Thermoelectric Energy Harvesting"	B22	Giovanni Marin (Aalto Univ., Finland) "Flexible thermoelectric device based on ALD-grown ZnO and ZnO:benzene thin films"
12:10–12:30	A23	Hu Yan (Zhengzhou Univ., China) "Preparation and Thermoelectric Properties of PEDOT/PSS-HNTs Hybrid Thin Films"	B23	Martins Rutkis (Univ. Latvia, Latvia) "Development of Thin Film Organic TE Generator based on tetrathiotetracene"
12:30–12:50	A24	Kaito Kanahashi (Nagoya Univ., Japan) "Thermoelectric Properties of Organic Donor-Acceptor Copolymers Investigated by Electrolyte Gating Tetrathiotetracenes Thin Films"	B24	Kaspars Pudzs (Univ. Latvia, Latvia) "Thermoelectrical Properties of 2- and 2,8-Substituted"
12:50–13:10	A25	Sanyin Qu (CAS, China) "Investigating on the Intrinsic Charge Transport in Poly(3-Hexylthiophene) by Regulating the Molecular Structure"	B25	Yanling Chen (CAS, China) "Enhanced Thermoelectric Performance of Copper Phthalocyanine by Iodine Doping"
13:10–14:30	Lunch Break			

Room A

Chair: Andrés Cantarero

Room B

Chair: Jian Pei

14:30–15:00	I15	INVITED LECTURE Shannon Yee (Georgia Tech, USA) "Metal Coordinated Polymer Thermoelectrics and Devices"	I16	INVITED LECTURE Linda A. Zotti (Auton. Univ. Madrid, Spain) "Direct Observation of Peltier Cooling in Molecular Junctions"
15:00–15:20	A26	Chi-Yuan Yang (Peking Univ., China) "Boost the N-Type Thermoelectric Performance of Diketopyrrolopyrrole-Based Polymers Through Backbone Engineering"	B26	Koji Miyazaki (Kyutech, Japan) "Printed Flexible Thermoelectric Device of the Organic/Inorganic Composite"
15:20–15:40	A27	Alejandro Goñi (ICMAB-CSIC/ICREA, Spain) "The Influence of Dynamic Disorder on the Vibrational and Thermal Properties of Hybrid Perovskites"	B27	Ling Xu (Huazhong Univ. Science and Technology, China) "Enhancing Thermoelectric Performance Using the Excited State by Photoexcitation base on the organic semiconductor materials"
15:40–16:00	A28	Matteo Massetti (IIT, Italy) "Microfabrication of an Organic TEG with Vertical Architecture"	B28	Roman Tkachov (TU Dresden / Fraunhofer, Germany) "Synthesis of n-type nickel-tetrathiooxalate polymer with improved and reproducible thermoelectric characteristics"
16:00–16:30	Coffee Break			
16:30–17:00	I17	INVITED LECTURE Nicolás Agrait (Auton. Univ. Madrid, Spain) "Quantum Thermopower in Molecular Junctions"	I18	INVITED LECTURE Laure Biniek (Univ. Strasbourg/CNRS) "Fabrication of Highly Oriented and Crystalline Conducting Polymer Films with Anisotropic Charge Transport and Thermoelectric Properties"
17:00–17:30	Closure			