

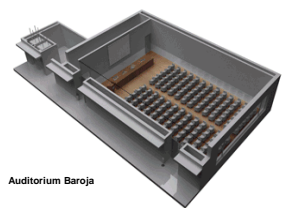
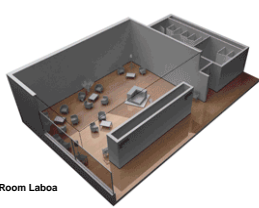
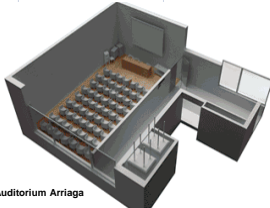

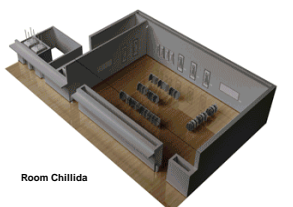



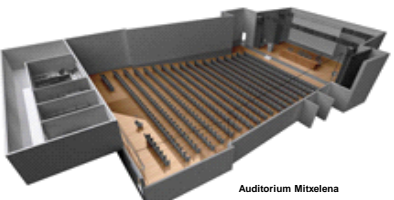
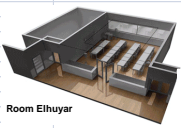

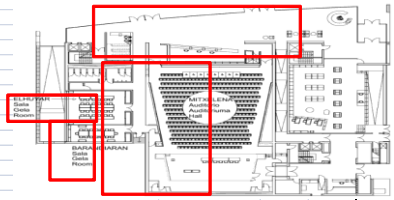
HEAT POWERED CYCLES CONFERENCE 2022 Bilbao, Spain, April 10-13

Conference at a Glance

	Sunday April 10	Monday April 11	Tuesday April 12	Wednesday April 13	
08:00-08:30		Registration		Registration	08:00-08:30
08:30-09:00		Welcome Speech			08:30-09:00
09:00-09:30			Registration		09:00-09:30
09:30-10:00		Keynote 1	Keynote 3	Keynote 5	09:30-10:00
10:00-10:15		COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	10:00-10:15
10:15-10:45		A1. Thermodynamic Cycles (I) Posters Session A2. Sorption Cycles (I)	A1. Thermodynamic Cycles (III) Posters Session A2. Sorption Cycles (III)	A3. H&M Transfer (I) Posters Session	10:15-10:45
10:45-11:15		LUNCH			10:45-11:15
11:15-11:30		Keynote 2	Keynote 4	Closing speech	11:15-11:30
11:30-12:00		A0. Special Session: Intelligent Thermal Energy Systems			11:30-12:00
12:00-12:15		A1. Special Session: The Energy in the Post-Covid Scenario			12:00-12:15
12:15-12:45		COFFEE BREAK			12:15-12:45
12:45-13:15		A1. Thermodynamic Cycles (II) Posters Session A2. Sorption Cycles (II)	A1. Thermodynamic Cycles (IV) Posters Session A2. Sorption Cycles (IV)		12:45-13:15
13:15-13:45					13:15-13:45
13:45-14:00					
14:00-14:30					
14:30-14:45					
14:45-15:15					
15:15-15:30					
15:30-16:00					
16:00-16:30					
16:30-16:45					
16:45-17:15					
17:15-17:30					
17:30-17:45	Registration (Hotel Barceló)	A3. H&M Transfer (I)			
17:45-18:15					
18:15-18:30	Welcome (Hotel Barceló)	A4. Heat Transfer Process			
18:30-19:00					
19:00-19:30		Meeting Organization Committee			
19:30-20:00					
20:00-20:30			Guided Tour (Guggenheim Museum)		
20:30-21:00			Welcome - Aurrezku		
21:00-21:30					
21:30-22:00					
22:00-22:30			GALA DINNER (Guggenheim Museum)		
22:30-23:00					

Room Elhuyar (12p COVID) Sala de usos múltiples para asistentes

Room	Auditorium Baroja (70p COVID)	Auditorium Arriaga (30p COVID)	Room Laboa (110 m2)	Room Chillida (220 m2)	Terrace (400 + 800 m2)	Room Barandiarán (8p COVID)	Hall	Auditorium Michelena (140p COVID)
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2ª PLANTA	 Auditorium Baroja		 Room Laboa		 Auditorium Arriaga			
1ª PLANTA	 Room Chillida	 Terrace						
PLANTA BAJA	 Hall		 Auditorium Michelena		 Room Elhuyar	 Room Barandiarán		

Important Note: The Organizing Committee of the 9th Heat Powered Cycles Conference reserves the right to amend and/or modify this program at any time

9TH HEAT POWERED CYCLES CONFERENCE
University of the Basque Country
Bilbao, Spain, 10-13 April 2022

CONFERENCE'S PROGRAM

Hotel Barceló Bilbao Nervión, Bilbao

10-Apr-22

17:30	Registration
18:30	Welcome Drinks and Snacks

9TH HEAT POWERED CYCLES CONFERENCE
University of the Basque Country
Bilbao, Spain, 10-13 April 2022

11-Apr-22

8:00 Registration Hall

8:30 Welcome Speech Auditorium Baroja (70p COVID)
 Few Announcements

9:30 Chair: Prof. Dr. Markus Preißinger Auditorium Baroja (70p COVID)
 Keynote Presentation
 Andreas P. Weiß,
 Technical University of Applied Sciences Amberg-Weiden, Germany
Steamy Issues – why the steam engine was the first implemented heat engine and its impact on future energy systems

10:15 - 10:45 Coffee Break

Poster Session
 Room Laboa (110 m2)
 Chair: TBD

Time Paper ID Authors Title
 10:15 - 19:00
 Posters will be available for display during the entire conference

A-1 - THERMODYNAMIC CYCLES I
 Auditorium Baroja (70p COVID)
 Chair: Prof. Mike Tierney

Time	Paper ID	Authors	Title
10:45	HPC-2021-400	T. Popp, A. P. Weiß, F. Heberle, P. Streit and D. Brüggemann University of Bayreuth Technical University of Applied Sciences Amberg-Weiden	<i>Thermodynamic Evaluation of an Experimental WHR ORC Test Rig with Quasi-Impulse Cantilever Turbine</i>
11:05	HPC-2021-401	G. Dino A. Frazzica D. Chêze A. Gabaldón D. Ntimos G. Tardioli, F. Fuligni CNR ITAE, Italy Univ Grenoble Alpes, CEA, LITEN, INES, F-38000 Grenoble (France) CARTIE, Parque Tecnológico de Boecillo, Boecillo 47151, Valladolid, Spain West Scotland Science Park, Glasgow, Scotland RINA Consulting SpA, Via Cecchi, 6, Genova, Italy	<i>Parametric simulation of a solar coupled heat pump system</i>
11:25	HPC-2021-402	V. Wolf E. J. Rabadán Santana S. Leyer University of Luxembourg, Luxembourg	<i>CO2 Power Cycle Assessment for Low Grade Waste Heat Recovery</i>
11:45	HPC-2021-416	S. Funayama1*, H. Takasu1 and Y. Kato1 1Laboratory for Advanced Nuclear Energy, Tokyo Institute of Technology, Japan	<i>Optimal volume fraction of support material in a heat transfer-enhanced composite for thermochemical energy storage</i>

A-2 - SORPTION CYCLES I
 Auditorium Arriaga (30p COVID)
 Chair: Prof. Robert Critoph

Time	Paper ID	Authors	Title
10:45	HPC-2021-101	Elias Eder 1 F. Stemer 1 Dieter Brüggemann 2 Markus Preißinger 1 1 Vorarlberg University of Applied Sciences, Dornbirn 6850, Austria 2 University of Bayreuth, Germany	<i>An experimental investigation of oily wastewater treatment in a bubble column humidifier using an improved method for measuring humidity</i>
11:05	HPC-2021-103	Natalia Alegria1* and Igor Peñalva1 University of the Basque Country (UPV/EHU)	<i>Projects for the desalination of brackish water and seawater at the Faculty of Engineering in Bilbao</i>
11:25	HPC-2021-300	Al-Hasni, Shihab Grant, Rachael Santori, Giulio The University of Edinburgh, School of Engineering, Scotland, UK	<i>The cost of manufacturing adsorption chillers</i>
11:45	HPC-2021-301	P. Postweiler M. Engelpracht A. Gibelhaus N. von der Assen RWTH Aachen University, Germany	<i>Environmental Process Optimisation of Adsorption-based Direct Air Capture of CO2</i>

12:15 - 13:15 Lunch

13:15	Auditorium Baroja (70p COVID) Keynote Presentation Prof. Giorgio Besagni Polytechnic of Milan - Italy	Chair: Prof. Dr. Roger R. Riehl	Multi-scale modelling of ejector refrigeration systems
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A-0 - SPECIAL SESSION - Intelligent Thermal Energy Systems			
Chair: Prof. Markus Preißinger		Auditorium Baroja (70p COVID)	
Time	Paper ID	Authors	Title
14:00	HPC-2021-403	T. Weller M. Johnson F. Trebilcock S. Lecompte D. Bauer German Aerospace Center, Germany Tecnalia Research & Innovation, Spain Ghent University, Belgium	Design, Build and Initial Testing of a Novel Energy Management System
14:20	HPC-2021-415	J. Bentz1, T. Hamacher2 C. Schweigler1 1 Munich University of Applied Sciences, 80335 Munich, Germany 2 Technical University Munich, 85748 Garching, Germany	Algorithm-Based Optimization for Energy-Efficient Operation of Refrigeration Systems
14:40	HPC-2021-424	S. Hiller1, C. Hartmann1, B. Hebenstreit1,2, S. Arzbacher Vorarlberg University of Applied Sciences, Dornbirn, 6850, Austria Luleå University of Technology, 971 87, Luleå, Sweden	Solidified Air Energy Storage: A Feasibility Study
15:00	HPC-2021-426	P. Wohlgenannt1, G. Huber1, K. Rheinberger1, M. Preißinger1, P. Kepplinger Vorarlberg University of Applied Sciences, Hochschulstrasse 1, 6850 Dornbirn, Austria	Modelling of a Food Processing Plant for Industrial Demand Side Management
15:20	HPC-2021-427	C. Baumann1, G. Huber1, M. Preißinger1, and P. Kepplinger Vorarlberg University of Applied Sciences, Hochschulstrasse 1, 6850 Dornbirn, Austria	A Cloud-Based Flexibility Estimation Method for Domestic Heat Pumps

15:40 - 16:00 Coffee, Tea, Refreshments, Snacks

A-2 - SORPTION CYCLES II			
Chair: Prof. Florian Heberle		Auditorium Arriaga (30p COVID)	
Time	Paper ID	Authors	Title
16:00	HPC-2021-302	D. Palamara1*, V. Palomba2, L. Calabrese1, A. Frazzica2 1Department of Engineering, University of Messina, Contrada di Dio Sant'Agata, 98166 Messina, Italy 2CNR - Istituto di Tecnologie Avanzate per l'Energia "Nicola Giordano", Via Salita S. Lucia sopra Contesse 5, 98126 Messina, Italy	Evaluation of ad/desorption dynamics of S-PEEK/Zeolite composite coatings by T-LTJ method
16:20	HPC-2021-303	A. Bonanno1*, V. Palomba1, S. Löwe2, U. Wittstadt2, A. Frazzica1 Davide La Rosa1 1 CNR ITAE, Salita S. Lucia sopra Contesse 5, 98126, Messina, Italy 2 Fahrenheit GmbH, Siegfriedstr. 19, 80803 Munich, Germany	Experimental characterization of a full-scale geothermal adsorption heat pump
16:40	HPC-2021-304	R.W. Moss1 and R.E. Critoph2 1STET research group, School of Engineering, University of Warwick, UK	Modelling and design of an ammonia/salt resorption domestic heat pump
17:00	HPC-2021-319	E. Laurenz M. Linke A. Velte R. Volmer J. Weise G. Földner Fraunhofer Institute for Solar Energy Systems ISE Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM Bremen, Germany	Stacked adsorption module with aluminium composite foil: Simulation and experimental evaluation of a novel concept
17:20	HPC-2021-306	E. Piccoli1,2§ V. Brancato3, A. Frazzica3, F. Maréchal2, S. Galmarini 1Empa, Überlandstrasse 129, 8600 Dübendorf, Switzerland 2EPFL Valais, Rue de l'Industrie 17, 1950 Sion, Switzerland 3CNR-ITAE, Messina, Italy	Early Stage Adsorber Material Selection for Adsorption Heat Transformers

A-1 - Thermodynamic Cycles II

Chair: Prof. Dr. Andrea Weiβ

Auditorium Baroja (70p COVID)

Time	Paper ID	Authors	Title
16:00	HPC-2021-431	X. Peña L. Alonso J. Iturralde A. Agirre Tecnalia, Energy and Environment Division, Area Anardi, 5, Azpeitia E20730, Spain	<i>Design and experimental validation of a R290 dual-source reversible heat pump prototype</i>
16:20	HPC-2021-405	A. Metsue R. Debroeyer S. Poncet Y. Bartosiewicz UCLouvain, Institute Mechanics, Materials, and Civil Engineering, Belgium Université de Sherbrooke, Canada	<i>An improved thermodynamic model for supersonic ejectors</i>
16:40	HPC-2021-429	M. Falsaflooni, M. Poirier1 and P. Simard1 CanmetENERGY, Natural Resources Canada, 1615 Lionel-Boulet Blvd., Varennes, Québec, Canada	<i>Solar cooling system for a buildings using parallel ejectors</i>
17:00	HPC-2021-407	J. Quenel M. Anders B. Atakan University of Duisburg-Essen, Germany	<i>Propane-isobutane mixtures in heat pumps with higher temperature lift: an experimental investigation</i>
17:20	HPC-2021-425	U. Oyarzabal1*, A. Erkoreka1, I. Gomez-Arriaran1, D. Novales1, B. Herrasti2 1Department of Thermal Engineering, Faculty of Engineering of Bilbao University of the Basque Country (UPV/EHU), Avda. Urquijo s/n 48013 Bilbao, Spain 2 Department of Mechanical Engineering, SENER Ingeniería y Sistemas S.A., Avda. Zugazarte 56, 48930 Getxo, Spain	<i>Solar tower plant extra electricity production potential by means of harnessing excess solar energy</i>

A-3 - HEAT AND MASS TRANSFER I

Chair: Prof. Dr. Giorgio Besagni

Auditorium Baroja (70p COVID)

Time	Paper ID	Authors	Title
17:40	HPC-2021-305	S. Pizzanelli1*, A. Freni1, F. Martini2, L. G. Gordeeva3,4, M. V. Solovyeva3,4 and C. Forte1 1 CNR-ICCOM, Institute of Chemistry of OrganoMetallic Compounds 2 University of Pisa 3 Bareskov Institute of Catalysis 4 Novosibirsk State University	<i>NMR study of water exchange on a MOF for use in adsorption heat transformation processes</i>
18:00	HPC-2021-201	M. Engelpracht D. Rezo A. Gibelhaus A. Bardow RWTH Aachen University, Aachen, Germany Forschungszentrum Jülich, Germany ETH Zurich, Switzerland	<i>The Potential of Heat and Mass Recovery for Adsorption Heat Transformers</i>
18:20	HPC-2021-202	N. Mügge A. Kronberg M. Glushenkov E. Y. Kenig Paderborn University, Germany Encontech B.V., Netherlands	<i>On heat regeneration limitations in heat engines with dense fluids</i>
18:40	HPC-2021-203	Makram Mikhaeil Matthias Gaderer Belal Dawoud OTH Regensburg, Germany Technical University of Munich, Germany	<i>An experimental study on the effect of the heat and mass transfer characteristic lengths on the adsorption dynamics in two different open structured plate heat exchangers</i>

A-4 - HEAT TRANSFER PROCESS

Chair: Dr. Jesús Esarte

Auditorium Arriaga (30p COVID)

Time	Paper ID	Authors	Title
17:40	HPC-2021-430	A. Mansour J. Lagrandeur S. Poncet Mechanical Engineering Department, Université de Sherbrooke, Canada	<i>Vortex Tube Thermodynamic Model Operating with Two-Phase Fluids</i>
18:00	HPC-2021-504	M. Aresti 1, J. Esatella1, A. Accarate2, L. Hurtado2, J. Esarte1 1NAITEC Centro tecnológico de automoción y mecatrónica 2ALAZ-ARIMA	<i>Influence of nanofluid on a connected thermosyphons</i>
18:20	HPC-2021-314	E. Laurenz1*, G. Földner1, A. Velte1 and L. Schnabel1 Fraunhofer Institute for Solar Energy Systems, Germany	<i>Extended Frequency Response Analysis for Loading and Temperature Dependent Heat and Mass Transfer Evaluation in Adsorbent Coatings</i>
18:40	HPC-2021-428	Andrew N. Aziz1,2*, Saad Mahmoud1, Raya Al-Dadah1, Ibrahim Albaik1 1School of Engineering, University of Birmingham, Edgbaston, Birmingham 2 City of Scientific Research and Technological Applications, Egypt	<i>Numerical Investigation of Desiccant Cooling Using Aluminium Fumarate Metal Organic Framework Material</i>

9TH HEAT POWERED CYCLES CONFERENCE
University of the Basque Country
Bilbao, Spain, 10-13 April 2022

12-Apr-22

8:30 **Registration** **Hall**

9:30 **Chair: Prof. Dr. Roger R. Riehl** Auditorium Baroja (70p COVID)
Keynote Presentation
Dr. Robert Hanlon *My thermodynamic journey from Carnot to Gibbs – A physical interpretation of maximum work*
Department of Chemical Engineering, Massachusetts Institute of Technology, USA

10:15 - 10:45 **Coffee Break**

Poster Session
Chair: TBD **Room Laboa (110 m2)**

Time Paper ID Authors Title
 10:15 - 18:00
Posters will be available for display during the entire conference

A-2 - SORPTION CYCLES III

Chair: Prof. Dr. Zacharie Tamainot-Toto Auditorium Arriaga (30p COVID)

Time	Paper ID	Authors	Title
10:45	HPC-2021-307	MJ. Darvish1, H. Bahrehmand1 and M. Bahrami1 <i>1 Laboratory for Alternative Energy Conversion , Simon Fraser Un., Canada</i>	<i>An analytical design tool for pin fin sorber bed heat and mass exchanger</i>
11:05	HPC-2021-308	Camila Dávila1*, Nicolas Paulus1 and Vincent Lemort1 <i>1University of Liège, Thermodynamics Laboratory, Liège, Belgium</i>	<i>Experimental Investigation of a Gas Driven Absorption Heat Pump and In-Situ Monitoring</i>
11:25	HPC-2021-309	AL-Hasni. Shihab1and Santori. Giulio1 <i>1The University of Edinburgh, School of Engineering Edinburgh, Scotland, UK</i>	<i>3D printed adsorption heat transformer</i>
11:45	HPC-2021-310	T. Toppi1, M. Aprile1, M. Motta1, 2, S. Vasta3, W. Mittelbach4 and A. Freni2 <i>1Department of Energy, Politecnico di Milano 2CNR ICCOM - Istituto di Chimica dei Composti Organometallici, Pisa 3CNR ITAE - Istituto di Tecnologie Avanzate per l'Energia, Messina 4Sorption Technologies GmbH, Freiburg, Germany</i>	<i>Testing of a falling-film evaporator for adsorption chillers</i>

A-1 - THERMODYNAMIC CYCLES III

Chair: Prof. Dr. Robert Hanlon Auditorium Baroja (70p COVID)

Time	Paper ID	Authors	Title
10:45	HPC-2021-410	M. Aps1 F. Durmus B. Atakan <i>University of Duisburg-Essen, Duisburg, Germany</i>	<i>Theoretical investigation of the potential of capillary heat exchangers in heat pumps</i>
11:05	HPC-2021-411	M. Preißinger <i>Vorarlberg University of Applied Sciences</i>	<i>Predictive maintenance in thermal power plants: a systematic literature survey</i>
11:25	HPC-2021-408	G. Prokhorskii1*, V. Seiler1, C. Steigh1, M. Netzer2 and M. Preißinger1 <i>Vorarlberg University of Applied Sciences, Austria 2Bertsch Energy GmbH & Co KG Vorarlberg, Austria</i>	<i>Failure detection in a water treatment system of a biomass CHP</i>
11:45	HPC-2021-414	J. Castresana1,2*, G. Gabiña1, L. Martín2, Z. Uriondo2 <i>1 AZTI, Marine Research, Basque Research and Technology Alliance, Spain 2 Department of Thermal Engineering, University of the Basque Country UPV/EHU</i>	<i>Artificial Neural Network based marine diesel engine modelling</i>

12:15 - 13:15 **Lunch**

13:15	Auditorium Baroja (70p COVID) Keynote Presentation Prof. Dr. Zacharie Tamainot-Teto Warwick University - UK	Chair: Prof. Dr. Mike Tierney <i>Adsorption Heat Pumps: Challenges and Future Perspectives</i>
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A1. Special Session: The Energy in the Post-Covid Scenario
Chair: Prof. Dr. Jesús María Blanco Iñarbe
Auditorium Baroja (70p COVID)

Time

14:00 - 15:30

The Energy in the Post-COVID Scenario

Moderator José Ignacio Hormaeche - *Managing Director*
Invited Speaker Luis Pedrosa - *Division Director of Energy and Environment*
Invited Speaker Sergio Relloso - *Business Development of New Technologies*
Invited Speaker Xavier Jordi - *Strategy Director*
Invited Speaker Guillermo Basañez-Uñanue - *Responsible for the Study Area*
Invited Speaker Xabier Sagartzazu - *Director of Advanced Fabrication, Energy and Power Elect Units*
Invited Speaker Javier Villanueva Latorre - *Managing Director*

CLUSTER DE ENERGÍA <http://www.clusterenergia.com/home>
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IDOM <https://www.idom.com/en/>
EVE <https://eve.eus/?lang=en-gb>
IKERLAN <https://www.ikerlan.es/en/>
ENERCLUSTER <https://www.enercluster.com/en/>

15:30 - 16:00 Coffee, Tea, Refreshments, Snacks

A-2 - SORPTION CYCLES IV
Chair: Prof. Dr. Roger Moss
Auditorium Arriaga (30p COVID)

Time	Paper ID	Authors	Title
16:00	HPC-2021-311	Vaclav Novotny1*, Jan Spale1, Jan Pavlicko1, Jan Novotny1 Michal Kolovratnik1 1Czech Technical University in Prague	<i>Experience From the Operation of an Absorption Power Cycle with LiBr Working Fluid and its Prospects for Future</i>
16:20	HPC-2021-312	S.J. Metcalf1*, A.M. Rivero-Pachó1 and R.E. Critoph1 1School of Engineering, University of Warwick, Coventry, UK	<i>Testing of a Carbon-Ammonia Gas-Fired Heat Pump</i>
16:40	HPC-2021-313	G.H. Atkinson, R.E. Critoph*, and S. Hinners School of Engineering, University of Warwick, UK	<i>Ammonia-Salt Reactions for Heat Pumping and Thermal Transforming Applications</i>
17:00	HPC-2021-315	Stefan Petersen1*, Walther Hüls Guido1 1TU Berlin, Institut für Energietechnik, Berlin Germany	<i>Control of solution flow rate in single stage absorption chillers</i>
17:20	HPC-2021-318	Sai Yagnamurthy School of Engineering, University of Warwick, UK	<i>Assessment of an adsorption based solar heating system for domestic heating applications in Ladakh</i>

A-1 - THERMODYNAMIC CYCLES IV
Chair: Prof. Dr. Markus Preißinger
Auditorium Baroja (70p COVID)

Time	Paper ID	Authors	Title
16:00	HPC-2021-413	Jan Spale1*, Vaclav Novotny1, Andreas P. Weiß1,2, Michal Kolovratnik1 1Czech Technical University in Prague 2University of Applied Sciences Amberg-Weiden, Germany	<i>Experimental Development of Additively Manufactured Plastic Turboexpanders towards an Application in the ORC</i>
16:20	HPC-2021-412	Florian Raab1*, Harald Klein2, Frank Opferkuch1 1Technische Hochschule Nuernberg Gerog Simon Ohm 2Technische Universitaet Muenchen	<i>A Steam Rankine Cycle pilot plant for Distributed High Temperature Waste Heat Recovery</i>
16:40	HPC-2021-205	M. Glushenkov, A. Kronberg Encontech B.V. TNW/SPT, The Netherlands	<i>Experimental study of an isobaric expansion engine-pump</i>
17:00	HPC-2021-204	S. Roosjen1*, M. Glushenkov2, A. Kronberg2 and S.R.A. Kersten1 1SPT/TNW, University of Twente, The Netherlands 2Encontech B.V. TNW/SPT, The Netherlands	<i>Waste heat recovery systems with isobaric expansion technology using pure and mixed working fluids</i>
17:20	HPC-2021-419	Andres Giraldo1*, Michel Delanaye2 and Vincent Lemort3 1,3University of Liege, Belgium 2MITIS SA, Belgium	<i>Experimental testing of micro-CHP for decentralized energy production</i>

19:30 - 20:30	Guided Tour - Gugenheim Museum
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20:30 - 21:00	Welcome - Aurresku
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21:00	Gala Dinner
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9TH HEAT POWERED CYCLES CONFERENCE
University of the Basque Country
Bilbao, Spain, 10-13 April 2022

13-Apr-22

8:30 - 9:00 Registration Hall

9:30

Chair: Prof. Dr. Zacharie Tamainot-Teto
 Keynote Presentation
 Prof. Yuri Aristov
 Borekov Institute of Catalysis - Russia

Auditorium Baroja (70p COVID)

Adsorption for Energy Conversion and Storage: What Have We Learned over the Past Decade?

10:15 - 10:45

Coffee Break

Poster Session

Chair: TBD

Room Laboa (110 m2)

Time Paper ID Authors Title
 10:15 - 12:30

Posters will be available for display during the entire conference

A-3 - Heat and Mass Transfer II

Chair: Prof. Dr. Mike Tierney

Auditorium Baroja (70p COVID)

Time Paper ID Authors Title

10:45

HPC-2021-206 G. Lopez-Ruiz^{1,2},
 I. Álava¹,
 J. M. Blanco
 1 Ikerlan Technology Research Centre, Spain
 2 School of Engineering Bilbao, Dept. of Energy Engineering, Spain

Numerical study on the influence of different H₂/CH₄ mixtures and excess air levels in micromix-type burners for industrial boilers

11:05

HPC-2021-207 M. Jäger
 TU Berlin, Marchstr. 18, 10587 Berlin, Germany

The influence of the contact area size on the effective thermal conductivity of random packed beds with stagnant gas

11:25

HPC-2021-320 E. Thiele
 F. Ziegler
 Technische Universität Berlin, Institut für Energietechnik
 Germany

Thermal operation map of the Lamm-Honigmann energy storage

11:45

HPC-2021-209 M. van der Pal^{1*},
 K. Ingenwepelt²
 R. de Boer¹
 1 TNO Energy Transition, Westerduinweg 3, 1755 LE, Petten, The Netherlands
 2 Hochschule Düsseldorf, University of Applied Sciences, Münsterstraße 156, 40476 Düsseldorf, Germany

Development of a latent heat storage for industrial application based on adipic acid - graphite composite

12:05

HPC-2021-423 M. Mazzetti
 G. Skaugen
 Sintef Energy Research, Kolbjørn Heijes vei 1D, 7034 Trondheim, Norway

Electro Deionization for treatment of Condensate of Steam Bottoming Cycles

12:15

Closing Speech