

CasCatBel School - Program

June 8

19.30 Welcome Party

June 9

8.45-9.00 Introduction (D. Serrano)

9.00-9.45 Lecture 1 – **W.J. Roth** (Jagellonian University) - ZEOLITE CATALYSIS - TRANSFORMING LABORATORY LEADS INTO INDUSTRIAL REALITY

9.45-10.30 Lecture 2 – **P. Nachtigall** (Charles University) - UNDERSTANDING THE CATALYTIC ACTIVITY OF MICROPOROUS CATALYSTS - COMPUTATIONAL APPROACH

10.30-11.00 Coffee Break + Poster Session

11.00-11.45 Lecture 3 – **A. Horvat** (Silkem) - ZEOLITE TRANSFORMING FROM SUSPENSION TO AGGLOMERATES

11.45-12.30 Lecture 4 – **C. Perego** (eni) - ADVANCES IN BIOFUELS

12.30-14.00 Lunch

14.00-14.45 Lecture 5 – **J.S. Mitchell** (ETH Zurich) - POTENTIAL APPLICATIONS OF HIERARCHICAL ZEOLITES FOR THE BIOMASS CONVERSION INTO ADVANCED BIOFUELS

14.45-15.30 Lecture 6 – **J.C. Serrano** (Abengoa Research) - BIOMASS HYDROTHERMAL PROCESSING

15.30-16.00 Coffee Break + Poster Session

16.00-16.45 Lecture 7 – **T. Bridgwater** (University of Aston) - BIOMASS PYROLYSIS

16.45-17.30 Lecture 8 – **A.A. Lappas** (CERTh) - CHARACTERIZATION AND PROPERTIES OF BIO-OILS PRODUCED FROM LIGNOCELLULOSE BY PYROLYSIS AND CATALYTIC PYROLYSIS

17.30-17.45 Oral 1 – H.V. Thang, P. Nachtigall - THEORETICAL INVESTIGATION OF ACIDOBASIC PROPERTIES OF 3D AND 2D ZEOLITES

17.45-18.00 Oral 2 – M. Shamzhy, M.V. Opanasenko, J. Čejka - PERFORMANCE OF MOFS IN ACID-CATALYZED REACTIONS: COMPARISON WITH LARGE- AND EXTRA-LARGE PORE ZEOLITES

19.00 Barbeque

June 10

- 8.30-9.15 Lecture 9 – **G. Huber** (University of Wisconsin) - THERMOCATALYTIC ROUTES FOR BIOMASS CONVERSION INTO FUELS
- 9.15-9.30 Oral 3 – K.V. Avramidou, P.A. Lazaridis, S.A. Karakoulia, K. S. Triantafyllidis - FAST PYROLYSIS OF MIXTURES DERIVED FROM AQUEOUS PHASE HYDROLYSIS OF BIOMASS WITH SOLID ACID CATALYSTS
- 9.30-9.45 Oral 4 – V.B.F. Custodis, P. Hemberger, Z. Ma, J.A. van Bokhoven - THE DECOMPOSITION MECHANISM OF LIGNIN FAST PYROLYSIS
- 9.45-10.00 Oral 5 – M. Al-Naji, N. Wilde, R. Gläser - AQUEOUS-PHASE PROCESSING OF WET WASTE BIOMASS: TOWARDS CATALYSTS WITH IMPROVED STABILITY
- 10.00-10.15 Oral 6 – M. Trejda, K. Stawicka, M. Ziolk - TRIACETIN FORMATION USING DIFFERENT MESOPOROUS SOLIDS CONTAINING SULPHONIC SPECIES
- 10.15-10.45 Coffee Break + Poster Session**
- 10.45-11.00 Oral 7 – T.C. Keller, E.G. Rodrigues, S.J. Mitchell, J. Pérez-Ramírez - GENERATION OF NOVEL BASIC CENTERS IN HIGH-SILICA ZEOLITES AND THEIR APPLICATION IN BIO-OIL UPGRADING
- 11.00-11.15 Oral 8 – I.V. Shamanaev, I.V. Deliy, E.Yu. Gerasimov, R.I. Kvon, V.A. Rogov, G.A. Bukhtiyarova - OPTIMIZATION OF NICKEL PHOSPHIDE CATALYSTS PREPARATION FOR METHYL PALMITATE HYDRODEOXYGENATION
- 11.15-11.30 Oral 9 – C. Ochoa-Hernández, P. Pizarro, V.A. de la Peña O'Shea, J.M. Coronado, D.P. Serrano - ENHANCING THE GREEN DIESEL PRODUCTION BY ADJUSTING THE Co/H-ZSM-5 PROPERTIES IN THE METHYL ESTERS HYDROTREATING
- 11.30-11.45 Oral 10 – L.A. Ciddor, A.F. Lee, K. Wilson - UPGRADING OF BIO-OIL VIA CATALYTIC ESTERIFICATION
- 11.45-12.00 Oral 11 – A. Mendoza, G. Vicente, L.F. Bautista, V. Morales - A SUSTAINABLE ALTERNATIVE FOR BIODIESEL PRODUCTION FROM OLEAGINOUS MICROORGANISMS USING ENZYME CATALYSTS
- 12.00-12.15 Oral 12 – I. Deliy, E.N. Vlasova, A.L. Nuzhdin, P.V. Aleksandrov, E.Yu. Gerasimov, G.A. Bukhtiyarova - THE EFFECT OF RAPESEED OIL ON THE SRGO HYDROPROCESSING: COMPARATIVE STUDY OF SULFIDE COMO AND NIMO CATALYSTS
- 12.30-14.00 Lunch**
- 14.15 Excursion**
- 19.00 Farewell Evening**

June 11

- 8.30-9.15 Lecture 10 – **D. Resasco** (University of Oklahoma) - BIO-OIL UPGRADING BY CONDENSATION REACTIONS
- 9.15-10.00 Lecture 11 – **B. Weckhuysen** (University of Utrecht) - IN-SITU SPECTROSCOPIC TOOLS FOR MONITORING CATALYTIC BIOMASS TRANSFORMATIONS
- 10.00-10.20 Coffee Break + Poster Session**
- 10.20-11.05 Lecture 12 – **D. Kubička** (VÚAnCh Litvínov) - CATALYTIC DEOXYGENATION OF TRIGLYCERIDES
- 11.05-11.50 Lecture 13 – **R. Rinaldi** (MPIK Mulheim) - DEVELOPMENT OF HDO CATALYSTS FOR BIO-OIL UPGRADING
- 11.50-12.00 Closing Remarks
- 12.00-13.15 Lunch**
- 13.15 Departure to the Airport

POSTERS

- P01 N. Wilde, M. Pelz, R. Gläser
ENHANCED CATALYTIC ACTIVITY OF MICRO-/MESOPOROUS TS-1 IN THE
EPOXIDATION OF BIODIESEL WITH H₂O₂
- P02 M. Položij, M. Rubeš, P. Nachtigall
THEORETICAL INVESTIGATION OF LAYERED ZEOLITES WITH MWW TOPOLOGY:
MCM-22P VS. MCM-56
- P03 S.D. Stefanidis, S.A. Karakoulia, K.G. Kalogiannis, E.F. Iliopoulou, K.S.
Triantafyllidis, A.A. Lappas
CATALYTIC PYROLYSIS OF BIOMASS USING FRESH AND MODIFIED NATURAL
BASIC MAGNESIUM OXIDE CATALYSTS
- P04 H.-Y. T. Chen, S. Tosoni, G. Pacchioni
DEPOSITION OF RUTHENIUM ON ANATASE (101) AND T-ZIRCONIA (101)
SURFACES
- P05 R. Jastrzebski, E.J. van den Berg, B.M. Weckhuysen, P.C.A. Bruijninx
CATALYTIC DIOXYGENATION OF CATECHOL BY NON-HEME IRON(III) COMPLEXES
AS A SUSTAINABLE ROUTE TO DIMETHYL ADIPATE
- P06 J.A. Calles, A. Carrero, A.J. Vizcaíno, L. García
HYDROGEN PRODUCTION BY STEAM REFORMING OF HYDROXYACETONE AS A
MODEL COMPOUND OF BIO-OIL USING Ni/SBA-15 CATALYSTS
- P07 A. Marianou, C. Michailof, E. Iliopoulou, K. Kalogiannis, K. Triantafyllidis, A.A.
Lappas
CONVERSION OF CELLULOSE TO HMF IN POLAR APROTIC SOLVENTS
- P08 A. Berenguer, C. Ochoa-Hernández, Y. Yang, I. Moreno, J.M. Coronado, P. Pizarro,
D.P. Serrano
SYNTHESIS OF CATALYSTS BASED ON SUPPORTED TRANSITION METAL
PHOSPHIDES FOR PHENOL HYDRODEOXYGENATION
- P09 T. Fakin, V. Kaučič, A. Ristić
RELATIONSHIP BETWEEN ZEOLITE LTA MORPHOLOGY AND THEIR BULK
PROPERTIES
- P10 J. Iglesias, J.A. Melero, G. Morales, M. Paniagua, B. Hernández, A.I. del Río
CATALYTIC REDUCTION OF FURFURAL BY MEERWEIN-PONNDORF-VERLEY H-
TRANSFER IN PRESENCE OF Zr-SBA-15
- P11 J.A. Hunns, A.F. Lee, K. Wilson
IN-SITU STUDIES OF HYDRODEOXYGENATION CATALYSTS FOR BIOFUELS
SYNTHESIS

- P12 M. Kothari, O. Kikhtyanin, Z. Tišler, D. Kubička
EFFECT OF DEALUMINATION BY ACID TREATMENT OF BEA ZEOLITE ON THE
ACIDITY AND ACTIVITY IN THE ALDOL CONDENSATION OF FURFURAL AND
ACETONE
- P13 J.A. Botas, J.M. Escola, D.P. Serrano, B. Paredes, M. López-Domínguez
BIOFUELS PRODUCTION BY HDO OF OLEIC ACID OVER Pd SUPPORTED ON
HIERARCHICAL ZEOLITES AND Al-SBA-15
- P14 M. Melián-Rodríguez, S. Shunmugavel, S. Kegnaes, A. Riisager
LIGNIN VALORIZATION USING HETEROGENOUS CATALYTIC OXIDATION
- P15 T.M. Sankaranarayanan, A. Berenguer, C. Ochoa-Hernández, P. Jana, I. Moreno,
J.M. Coronado, P. Pizarro, D.P. Serrano
HYDRODEOXYGENATION OF ANISOLE AS BIO-OIL MODEL COMPOUND OVER
SUPPORTED NICKEL AND COBALT CATALYSTS
- P16 M. Gyngazova, L. Blumenthal, R. Palkovits
MULTIPHASE REACTION SYSTEMS FOR THE EFFICIENT VALORISATION OF
BIOMASS