



5-7 OCTOBER

# ISFR 2011

TOLEDO (SPAIN)

6<sup>th</sup> International Symposium  
on Feedstock Recycling  
of Polymeric Materials

programme



<http://www.isfr2011.escet.urjc.es/>

## wednesday 5 october 2011

10:00 – 13:15 h	<b>Registration</b>
13:15 – 14:30 h	<b>Lunch</b>
14:30 – 15:00 h	<b>Opening Session</b>
15:00 – 15:45 h	<b>Plenary Session 1:</b> “Trends and perspectives in feedstock recycling of polymeric materials” <i>by Dr. J. M. N. van Kasteren</i>
15:45 – 16:45 h	<b>Conference session 1:</b> Thermal Decomposition
16:45 – 17:15 h	<b>Coffee break</b>
17:15 – 18:00 h	<b>Plenary session 2:</b> “Feedstock recycling of nitrogen containing polymers by fluidized bed pyrolysis” <i>by Dr. W. Kaminsky</i>
18:00 – 19:00 h	<b>Conference session 2:</b> Thermal Decomposition
20:00 h	<b>Welcome Reception</b>

## thursday 6 october 2011

9:00 – 9:45 h	<b>Plenary session 3:</b> “Catalysts for the conversion of waste plastics: challenges for the development of industrial processes” <i>by Dr. T. Bhaskar</i>
9:45 – 10:45 h	<b>Conference session 3:</b> Catalytic Processes
10:45 – 11:15 h	<b>Coffee break</b>
11:15 – 12:55 h	<b>Conference session 4:</b> Catalytic Processes and Gasification
13:15 – 14:30 h	<b>Lunch</b>

14:30 – 15:15 h	<b>Plenary session 4:</b> “Overview of the waste plastic recycling system in Japan and future tasks” <i>by Dr. T. Kamo</i>
15:15 – 16:15 h	<b>Conference session 5:</b> Advanced Mechanical Recycling and Characterization
16:15 – 17:30 h	<b>Poster session</b>
18:00 h	Toledo cultural visit with “tapas” dinner

## friday 7 october 2011

9:00 – 9:45 h	<b>Plenary session 5:</b> “Thermal and pyrolytic processes for the valorisation of waste plastics” <i>by Dr. P. T. Williams</i>
9:45 – 10:45 h	<b>Conference session 6:</b> Thermal Decomposition
10:45 – 11:15 h	<b>Coffee break</b>
11:15 – 13:15 h	<b>Conference session 7:</b> Chemolysis
13:15 – 14:30 h	<b>Lunch</b>
14:30 – 15:15 h	<b>Plenary session 6:</b> “European trends to progress towards capturing the full value of used plastics” <i>by Mr J. E. Johansson</i>
15:15 – 16:15 h	<b>Conference session 8:</b> Solvent Processes
16:15 – 16:45 h	<b>Coffee break</b>
16:45 – 18:25 h	<b>Conference session 9:</b> Integrated Evaluation of Alternatives
18:30 – 19:00 h	<b>Closing Ceremony</b>
20:00 h	<b>Gala Dinner</b>

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- 10:00 – 13:15 h **Registration**
- 13:15 – 14:30 h **Lunch**
- 14:30 – 15:00 h **Opening Session**
- 15:00 – 15:45 h **Plenary Session 1: "Trends and perspectives in feedstock recycling of polymeric materials" by J.M.N. van Kasteren**
- 15:45 – 16:45 h **Conference session 1: Thermal Decomposition**
- 15:45 – 16:05 h O-1: Valorization of waste tires by pyrolysis in a conical spouted bed reactor  
*G. López, M. Amutio, M. Artetxe, A. Erkiaga, J. Álvarez and M. Olazar*
- 16:05 – 16:25 h O-2: Advances in the recycling of plastic wastes for metallurgical coke production  
*M.A. Diez and R. Alvarez*
- 16:25 – 16:45 h O-3: Oil production by fast pyrolysis of cellulose/polyethylene mixtures in metal chloride presence  
*A. Solak and P. Rutkowski*
- 16:45 – 17:15 h **Coffee break**
- 17:15 – 18:00 h **Plenary session 2: "Feedstock recycling of nitrogen containing polymers by fluidized bed pyrolysis" by W. Kaminsky**
- 18:00 – 19:00 h **Conference session 2: Thermal Decomposition**
- 18:00 – 18:20 h O-4: Pyrolysis of halogen containing polymer mixtures.  
*Zs. Czégény, E. Jakab, T. Bhaskar and Y. Sakata*
- 18:20 – 18:40 h O-5: Investigation of pyrolysis of brominated flame retardant plastic  
*Z.Z. Hlaing, M. Adachi, J. Ma, H. Nakagome, F. Takeuchi, K. Omote and K. Kimura*
- 18:40 – 19:00 h O-6: Alternative fuels, the infinite energy  
*M. Garcia Villan*
- 20:00 h **Welcome Reception**

## thursday 6 october 2011

- 9:00 – 9:45 h **Plenary session 3: "Catalysts for the conversion of waste plastics: challenges for the development of industrial processes" by T. Bhaskar**
- 9:45 – 10:45 h **Conference session 3: Catalytic Processes**
- 09:45 – 10:05 h O-7: Hydroreforming of LDPE thermal cracking waxes over Ni/h-Beta catalysts with different Ni particle size obtained from different precursors  
*J. Aguado, D.P. Serrano, J.M. Escola and L. Briones*
- 10:05 – 10:25 h O-8: Catalytic cracking of waxes from polyolefins under FCC operating conditions  
*J.M. Arandes, I. Torre, M.J. Azkotai, M. Olazar, J. Ereña and J. Bilbao*
- 10:25 – 10:45 h O-9: Polystyrene hydrocracking in solution over bifunctional catalysts  
*E. Fuentes, A. Salbidegoitia, M.P. Gonzalez-Marcos and J.R. Gonzalez-Velasco*
- 10:45 – 11:15 h **Coffee break**



11:15 – 12:55 h	<b>Conference session 4: Catalytic Processes and Gasification</b>
11:15 – 11:35 h	<b>O-10: Catalytic decomposition of nitrogen containing polymers mixed with zeolite catalysts</b> <i>J. Bozi and M. Blazso</i>
11:35 – 11:55 h	<b>O-11: Production of hydrogen and carbon materials from propylene by combined catalysts</b> <i>Z. W. Jiang, J. Gong, H.O. Yu and T. Tang</i>
11:55 – 12:15 h	<b>O-12: Air gasification of mixed plastic wastes using a two stage gasifier for the production of a producer gas with low tar and high calorific value</b> <i>J.S. Kim, J.W. Kim and T.Y. Mun</i>
12:15 – 12:35 h	<b>O-13: Gasification: an innovative approach for the thermal treatment of plastic residues</b> <i>V. Wilk and H. Hofbauer</i>
12:35 – 12:55 h	<b>O-14: Preliminary assessment of plastic waste valorisation via sequential pyrolysis and catalytic reforming</b> <i>J. Dufour, D.P. Serrano and D. Iribarren</i>
13:15 – 14:30 h	<b>Lunch</b>
14:30 – 15:15 h	<b>Plenary session 4: "Overview of the waste plastic recycling system in Japan and future tasks" by T. Kamo</b>
15:15 – 16:15 h	<b>Conference session 5: Advanced Mechanical Recycling and Characterization</b>
15:15 – 15:35 h	<b>O-15: High performance recycling system for shredded plastics by using Raman identification</b> <i>H. Kawazumi, A. Tsuchida, K. Arikata, Y. Tsuchida, H. Hasuo and T. Oosaki</i>
15:35 – 15:55 h	<b>O-16: Development of mechanical recycling technology of waste polyolefin composites based on high speed centrifugal beating technology</b> <i>T. Yamawaki and Y. Ozaki</i>
15:55 – 16:15 h	<b>O-17: Analytical fractionation techniques application in the polyethylene photodegradation process</b> <i>M.T. Exposito, C. Dominguez, J. Codina and R.A. Garcia</i>
16:15 – 17:30 h	<b>Poster session</b>
18:00 h	<b>Toledo cultural visit with "tapas" dinner</b>

## friday 7 october 2011

9:00 – 9:45 h	<b>Plenary session 5: "Thermal and pyrolytic processes for the valorisation of waste plastics" by P.T. Williams</b>
9:45 – 10:45 h	<b>Conference session 6: Thermal Decomposition</b>
09:45 – 10:05 h	<b>O-18: Pyrolysis reaction of polyurethane foam and effect of metallic compound for thermal decomposition product</b> <i>T. Suzuki, H. Yanase, O. Terakado and M. Hirasawa</i>
10:05 – 10:25 h	<b>O-19: Auto shredder residue separation and pyrolysis</b> <i>A. Santini, L. Morselli, F. Passarini, I. Vassura, D. Serrano and J. Dufour</i>
10:25 – 10:45 h	<b>O-20: Evaluation and use of the fractions from cracking of waste plastics on production unit</b> <i>J. Mikulec, L. Švantner and I. Vailing</i>
10:45 – 11:15 h	<b>Coffee break</b>



11:15 – 13:15 h	<b>Conference session 7: Chemolysis</b>
11:15 – 11:35 h	<b>O-21: An upgraded chemical recycling of polyamides</b> <i>A. Kamimura, K. Kaiso, S. Suzuki, Y. Oishi, Y. Ohara, T. Sugimoto, K. Kashiwagi and M. Yoshimoto</i>
11:35 – 11:55 h	<b>O-22: Chemical depolymerisation of PET complex wastes: hydrolysis vs. glycolysis</b> <i>M. Arieta-Araunabeña, S. Arnaiz, A. Asueta, I. Robertson, L. Martinez and A. Aguado</i>
11:55 – 12:15 h	<b>O-23: Carbonate catalyzed nucleophilic substitution of poly(vinyl chloride)</b> <i>G. Grause, T. Hosoya, T. Kameda and T. Yoshioka</i>
12:15 – 12:35 h	<b>O-24: Chemical recycling of electronic devices composed of thermosetting resin and inorganic compounds</b> <i>H. Ebina and H. Tagaya</i>
12:35 – 12:55 h	<b>O-25: Chemical reaction of phenol resin foam powder and prepolymer in high temperature fluids</b> <i>T. Sugeno and H. Tagaya</i>
12:55 – 13:15 h	<b>O-26: Kinetic study of the glycolysis of flexible polyurethane wastes using stannous octoate as catalyst</b> <i>D. Simón, M.T. García, A. de Lucas, R. Mazarro and J.F. Rodriguez</i>
13:15 – 14:30 h	<b>Lunch</b>
14:30 – 15:15 h	<b>Plenary session 6: "European trends to progress towards capturing the full value of used plastics" by J.E. Johansson</b>
15:15 – 16:15 h	<b>Conference session 8: Solvent Processes</b>
15:15 – 15:35 h	<b>O-27: Dehydrochlorination of polyvinylchloride in green solvent</b> <i>Q. Zhou, X.L. He and Y.Z. Wang</i>
15:35 – 15:55 h	<b>O-28: Recovery of useful resources from WEEE by using recyclable solvent</b> <i>T. Kamo, H. Ito, Z. Zou, M. Adachi, T. Imai, H. Matsui and H. Nakagome</i>
15:55 – 16:15 h	<b>O-29: Production of clean and high calory powder fuel from mixture of waste plastics and waste biomass using subcritical water</b> <i>T. Sako, I. Okajima, Y. Fujimori, T. Shimizu and I. Kimura</i>
16:15 – 16:45 h	<b>Coffee break</b>
16:45 – 18:25 h	<b>Conference session 9: Integrated Evaluation of Alternatives</b>
16:45 – 17:05 h	<b>O-30: Study of OLED end of life treatments</b> <i>L. Barruetebeña, M. Arieta-Araunabeña and C. Delgado</i>
17:05 – 17:25 h	<b>O-31: Feedstock recycling of waste polymers by thermal cracking in molten metal – thermodynamic analysis of the process</b> <i>M. Stelmachowski</i>
17:25 – 17:45 h	<b>O-32: Environmental evaluation of glycolysis and hydrolysis of PET waste using Life Cycle Assessment</b> <i>M. Calero, J.L. Martí, B. Ferreira, M. Arieta, L. Martinez and A. Aguado</i>
17:45 – 18:05 h	<b>O-33: Life style assessment (LSA) of plastic engineering prior to LCA</b> <i>A. Oku</i>
18:05 – 18:25 h	<b>O-34: Vinyl Plus, the new European PVC industry's voluntary programme towards sustainability</b> <i>A. Sevenster</i>
18:30 – 19:00 h	<b>Closing Ceremony</b>
20:00 h	<b>Gala Dinner</b>



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## sponsors

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