

Room: Gallieni 2

**Workshop 3:** *Corrosion by Hot Gases and Combustion Products with Emphasis on High-Temperature Corrosion in the Chemical and Petrochemical Industries.*  
organisers: M. Schütze, F. Ropital

---

**Poster Sessions**    **Monday 13 September: 18:00 – 19:30**  
                              **Tuesday 14 September: 18:00 – 19:30**

*List of Posters: see at the end of this Workshop Program*

---

### Monday 13 September

---

- 10:00**            **Opening Ceremony**
- 10:30**            **PL-473**  
Predicting the Future From the Past in Corrosion Science and Engineering.  
*Digby MACDONALD*
- 11:15**            **PL-563**  
An Overview of Materials Degradation by Stress Corrosion in PWRs.  
*Peter SCOTT*
- 12:00**            Cavallaro Medal Lecture  
From the empirical approach to corrosion science - A retrospect on fifty years corrosion research.  
*Hubert GRÄFEN*
- 12:30**            *Lunch*
- Co-chairs: H. de Bruyn, F. Ropital
- 14:00**            **Introduction**
- 14:20**            **03-KN-551**  
Failure mechanism and material degradations at high temperatures in the ammonia synthesis.  
*Jürgen KORKHAUS*
- “Coke deposition, carburization and metal dusting”
- 15:00**            **03-O-261**  
Coupling Thermogravimetric and Acoustic Emission measurements: its application to study the inhibition of catalytic coke deposition.  
*François ROPITAL*
- 15:20**            **03-O-018**  
Coke Deposition and Carburization on Alloys used in the Petrochemical Industry.  
*Rick DURHAM*

- 15:40**      *Coffee break*
- 16:10**      **03-O-328**  
Carburisation corrosion: issues and new alloy solution.  
*Dominique FLAHAUT*
- 16:30**      **03-O-440**  
Metallurgical Investigation of Metal Dusting Corrosion in Plant Exposed Nickel-Based Alloy 602CA.  
*Jorun ZAHL ALBERTSEN*
- 16:50**      **03-O-385**  
Metal dusting of Fe-Al alloys at 600°C in CO-H<sub>2</sub>-H<sub>2</sub>O gas mixtures.  
*Reinhard BERNST*
- 17:10**      **03-O-181**  
Metal dusting in low-NO<sub>x</sub> recirculation burners for fuel oil.  
*Helen ACKERMANN*
- 18:00 - 19:30**    **Poster Session - List of Posters: see at the end of this Workshop Program**
- 

## Tuesday 14 September

---

Co-chairs: J. Korkhaus, R. Pettersson

- 08:40**      **03-O-203** **Withdrawn**  
Effect of Surface Treatment on the Morphological Aspect of Meta Dusting on Stainless Steel.  
*Chao-Yi LIN*
- 09:00**      **03-O-323**  
Development of advanced metallic coatings resistant to corrosion in high temperature industrial atmospheres.  
*Till WEBER*
- “Corrosion by highly aggressive environments”
- 09:20**      **03-O-327**  
Hot Corrosion of Coated Single Crystal Superalloys.  
*Nigel SIMMS*
- 09:40**      **03-O-077**  
Local reactions between NaCl and KCl particles and metal surfaces.  
*Sung Chul CHA*
- 10:00**      **03-O-079**  
Influence of HCl and water vapour on the corrosion kinetics of Fe beneath molten ZnCl<sub>2</sub>/KCl.  
*Andreas RUH*
- 10:20**      *Coffee break*

- 10:50**            **03-O-246**  
High temperature corrosion in chloridizing atmospheres : development of material quasi-stability diagrams and coatings.  
*Sébastien DOUBLET*
- 11:10**            **03-O-266**  
Sulphidation and Oxidation Behaviour of Certain Silicides in an Atmosphere of Low Oxygen and High Sulphur Potentials at 850°C.  
*Hailiang DU*
- 11:30**            **03-O-390**  
Corrosion Behavior of Ni base alloys and 316 stainless steel in Supercritical Water under alkaline conditions.  
*Ryutaro FUJISAWA*
- 11:50**            **03-O-273**  
The Performance of Pack Cementation Coatings in Air and 100%Steam Environments for Super Critical Steam Turbines.  
*Simon ROSE*
- 12:10**            **03-O-320**  
Corrosion Behaviour of Supercritical Fossil Fuel Power Plant Material in Air and Water Vapour Environment.  
*Palani MATHIAZHAGAN*
- 12:30**            *Lunch*
- “General high temperature corrosion issues”  
Co-chairs: S. Datta, M. Schütze
- 14:00**            **03-O-264**  
Nanoscale Studies of the Initial Stages of Degradation of Diamondlike Carbon (DLC) Coatings.  
*Santu DATTA*
- 14:20**            **03-O-143**  
Corrosion mechanism degradation at high temperature of austenitic stainless steel, low nickel austenitic stainless steel and nickel base alloys in chemical atmosphere.  
*Eric CHAUVEAU*
- 14:40**            **03-O-275**  
The effect of CO<sub>2</sub> on the corrosion rate in simulated combustion atmospheres.  
*Martti MÄKIPÄÄ*
- 15:00**            **03-O-363**  
Cyclic oxidation performance of stainless steels in dry and moist air.  
*Rachel PETTERSSON*
- 15:20**            **03-O-416**  
Effects of Heat Treatments on the Oxide Layer of Fe-15at%Cr Alloy Surface.  
*Eungyeul PARK*
- 15:40**            *Coffee break*

- 16:10**      **03-O-237**  
Diffusion coatings for the high temperature corrosion protection of 9-12 % Cr steels.  
*Valentin ROHR*
- 16:30**      **03-O-463**  
Oxidation behaviour of Fe-Al alloys analysed using in- and ex-situ techniques.  
*Birgit PÖTER*
- 16:50**      **03-O-249** Withdrawn  
Role of fused oxides at high temperature oxidation of metals.  
*Valery BELOUSOV*
- 17:10**      **Closing**
- 18:00 - 19:30**   **Poster Session - List of Posters: see at the end of this Workshop Program**

**Workshop 3: List of Posters**

- 03-P-029**      The Isothermal Oxidation and Hot Corrosion Behavior of Protective Diffusion Coatings.  
*Nikiforos MARAGOUDAKIS*
- 03-P-136**      Evaluation of hot corrosion protection of Cr-Al and CoNiCrAlY on IN-738LC.  
*M.H. SHARIAT*
- 03-P-159**      Evaluation of the hot corrosion protection of coatings for first-stage gas turbine blades.  
*Davar REZAKHANI*
- 03-P-161**      Corrosion and prevention in the field of storage of liquid sulphur.  
*Abdelhak MOUSTAQSSA*
- 03-P-361**      Failure of Steam Superheater Tube of Reformer Heater.  
*Wafa RIAD*
- 03-P-542**      Corrosion heating elements in the regenerative gas-gas heater.  
*Stanislaw KROL*
- 03-P-550**      Corrosion of Cr-Ni-Mo steel occurring in water solutions containing sulfate, chloride and fluorine ions.  
*Stanislaw KROL*