

Program

23rd July

- 12:30 The organizers welcome the participants at New Chitose Airport.**
Symposium bus is arranged for participants to move from the airport to the symposium hotel via National Park (Toya caldera lake, Mt. Usu and Showashinzan).
- 17:00 Arrival at symposium hotel (Rusutsu resort hotel & convention)
Check in & Registration
- 18:30 Welcome reception

24th July

- 8:45 Opening Address** (Chair: H. Habazaki)
Plenary Session:
(Chair: G. E. Thompson)
- 9:00 Plenary: F. Di Quarto (Palermo University)
Anodizing science and technology: achievements and perspectives. A personal view
- 9:45 Coffee break
- Session: Barrier-type anodic oxides and their capacitor application**
(Chairs: A. W. Hassel & H. Takahashi)
- 10:00 M. M. Lohrengel (University of Duesseldorf)
Ionic and electronic conductivity of anodic oxide films of Ta
- 10:30 S. Ono (Kogakuin University)
Effect of nitrogen doping on dielectric property of anodic films formed on valve metals
- 11:00 J. Koenitzer (Cabot Supermetals, Co. Ltd.)
A new era for high CV/g tantalum powders
- 11:30 K. Ueno (Nippon Chemi-con, Co. Ltd.)
Study of the interface between Ta anodic oxide film and conductive polymer PEDOT
- 12:00 Lunch
- Session: Porous anodic oxides** (Chairs: M. M. Lohrengel & S. Ono)
- 13:30 P. Schmuki (University of Erlangen-Nuremberg)
Anodization of Ti: Self-organizing TiO₂ nanostructures (nanotubes, nanobamboo, nanolace)
- 14:00 K. Hebert (Iowa State University)
Growth mechanisms of porous anodic alumina
- 14:30 H. Kameyama (Tokyo University of Agriculture and Technology)
Hydrogen production from bioethanol with an alumite catalyst
- 15:00-16:30 **Poster Session**

Session: Fundamentals of anodic film formation (Chairs: K. Hebert & Y. Tak)

- 16:30 G.E. Thompson (The University of Manchester)
Graded anodic oxide films on aluminium alloys for aerospace applications
- 17:00 H. Terryn (Vrije Universiteit Brussel)
Experimental Study and Modelling of Heat Transfer during Anodizing in a Wall-Jet Electrode Set-up
- 17:30 K. Shimizu (Keio University)
Anodizing - revisited
- 19:00 Banquet

25th July

Session: Etching and Passivity (Chairs: P. Schmuki & H. Masuda)

- 8:45 Y. Ogata (Kyoto University)
Pore formation in silicon and the pore filling
- 9:15 Y. Tak (Inha University)
Surface Area Control of Aluminum Etched Foil
- 9:45 A.W. Hassel (Max-Planck-Institut für Eisenforschung)
Tailoring of nanostructured alloys by anodisation
- 10:15 Coffee break

Session: Applications (Chairs: H. Terryn & H. Uchi)

- 10:30 S. Park (Chungbuk University)
Electrochemical hybrid capacitor based on nano carbon & metal oxide composite electrodes
- 11:00 K. Kim (Yonsei University)
Transition metal oxide nanocomposites for electrochemical capacitors
- 11:30 S. Moon (Korea Institute of Materials Science)
Wear resistive coating on aluminium using micro-arc oxidation method
- 12:00 Lunch

Session: Micro- and nano-technology (Chairs: S. Park & K. Shimizu)

- 13:30 H. Masuda (Tokyo Metropolitan University)
Functional nanodevices using anodic porous alumina
- 14:00 M. Iwasaki (Kinki University)
Flip-flop phenomenon of noble metal nanorods deposited in porous anodic alumina
- 14:30 H. Takahashi (Asahikawa College of Technology)
Micro- and nano-technologies based on anodizing of aluminum
- 15:15 **Closing remarks**

After the symposium, a bus will leave the hotel for New Chitose Airport at 15:30.
The arrival time at the airport is estimated to be 17:30.

Poster presentations

- P01 :** Formation of porous aluminum films by PVD for electrolytic capacitor application – Takashi Fujii, Yoshitaka Aoki, Koji Fushimi, Hiroki Habazaki (Hokkaido University), Takeshi Makino, Shoji Ono (Nippon Chemi-Con)
- P02 :** Influence of boron content on dielectric properties of crystalline anodic oxide films formed on aluminum - Ken Hashimoto, Hidetaka Asoh, Sachiko Ono (Kogakuin University)
- P03 :** Generation and basic characteristics of dielectric barrier discharge using anodic porous alumina in atmospheric pressure air - Toshiyuki Kawasaki (Nippon Bunri University)
- P04 :** Dielectric properties of anodic oxide films formed on niobium in ammonium alkaline electrolytes - Kazuko Nishimura (Kogakuin University), Kazuhiro Nagahara, Hideaki Takahashi (Hokkaido University), Hidetaka Asoh, and Sachiko Ono (Kogakuin University)
- P05 :** Formation of porous niobium films by oblique angle deposition: influences of deposition angle and substrate morphology – M. Tauseef Tanvir, Y. Aoki and H. Habazaki (Hokkaido University)
- P06 :** Unlimited growth of crystalline anodic oxide films on niobium - Masao Hori, Hidetaka Asoh and Sachiko Ono (Kogakuin University)
- P07 :** Fabrication of microporous alumina with large pore interval more than 1 μm - Hidetaka Asoh, Kota Uchibori, Masahiro Nakamura, and Sachiko Ono (Kogakuin University)
- P08 :** Formation of titanium dioxide nanotubes by anodization method – Sungmo Moon and Yongsoo Jeong (Korea Institute of Materials Science)
- P09 :** Functionalization of anodic TiO_2 nanotubes – Hiroaki Tsuchiya, Yuji Shinkai (Osaka University), Patrik Schumki, Doohun Kim (University of Erlangen-Nuremberg), Shinji Fujimoto (Osaka University)
- P10 :** Morphological variation of TiO_2 nanotube prepared by anodization – Kiyoung Lee, Jiyoung Kim, Hyeyoung Kim and Yongsug Tak (Inha University)
- P11 :** Ordered Ni and Au nanocones with 100 nm intervals using a porous anodic alumina film – Tomota Nagaura, Kenji Wada, Satoru Inoue (National Institute for Materials Science, University of Tsukuba)
- P12 :** Electronic behavior of amorphous anodic Nb_2O_5 nanofilms in ambient gas atmospheres – Damian Kowalski, Yoshitaka Aoki, and Hiroki Habazaki (Hokkaido University)
- P13 :** Surface oxide film on Pt-Co or Pd-Co PEFC cathode electrodes - Yuichi Tamura, Kento Taneda, Mikito Ueda and Toshiaki Ohtsuka (Hokkaido University)
- P14 :** Development of pH sensitive film using porous anodic oxide film of Al - Fumiyasu Nishiyama, Hidetaka Konno and Kazuhisa Azumi (Hokkaido University)
- P15 :** Pd/ γ -alumina graded layer formed in Pd/ γ -alumina/alumite composite membrane for durability of hydrogen permselective membrane – Masahiro Seshimo, Minoru Ozawa (Tokyo University of Agriculture and Technology), Masato Sone (Tokyo Institute of Technology), Makoto Sakurai, Hideo Kameyama (Tokyo University of Agriculture and Technology)
- P16 :** Development of high performance dehydrogenation catalyst using anodic oxide films on aluminum - Guangbin Zhou, Masatoshi Sugimasa, Atsushi Shimada, Takao Ishikawa (Hitachi)
- P17 :** The application of alumite catalysts in deodorization system for biomass derived – Dong Vien Vo, Yuzuru Takahashi, Mariko Kanehira, Lifeng Wang, Thanh Phong Tran, Makoto Sakurai, Hideo Kameyama (Tokyo University of Agriculture and Technology)

- P18** : Metallization of oxide /hydroxide film of aluminum: the palladium activation techniques - Himendra Jha, Tatsuya Kikuchi, Masatoshi Sakairi (Hokkaido University) and Hideaki Takahashi (Asahikawa National College of Technology)
- P19** : Self-regenerative activity of plate-type anodic alumina supported nickel catalysts Ni/NiAl₂O₄/γ-Al₂O₃/alloy with trace Ru during daily start-up and shut-down operation of methane steam reforming - Lu ZHOU, Yu GUO, Qi ZHANG, Hua Bo Li, Makoto SAKURAI, and Hideo KAMEYAMA (Tokyo University of Agriculture and Technology)
- P20** : Plate-type anodic alumina supported ruthenium catalysts for steam reforming of kerosene – HuaBo Li, Yu Guo, Lu Zhou, Jian Chen, Makoto Sakurai and Hideo Kameyama (Tokyo University of Agriculture and Technology)
- P21** : Diffusion limiting-current equation in the flowing-type droplet cell - Shunsuke Yamamoto, Koji Fushimi, Hiroki Habazaki, and Hidetaka Konno (Hokkaido University)
- P22** : Combinatorial microelectrochemistry with a scanning droplet cell on binary and ternary Ti, Ta and Hf alloys – Andrei Ionut Mardare (Max-Planck-Institut für Eisenforschung GmbH), Alfred Ludwig, Alan Savan, Andreas Dirk Wieck (Ruhr-Universität Bochum), Achim Walter Hassel (Max-Planck-Institut für Eisenforschung GmbH)
- P23** : Formation of preferentially oriented ZnO layer by electrochemical method – Hyeyoung Kim, Yunkyong Jo, Kiyoung Lee, Yongsug Tak (Inha University)
- P24** : Evaluation of photocatalytic activity of nanoporous ZnO films prepared by Anodization - Yuta Kobayashi, Hidetaka Asoh and Sachiko Ono (Kogakuin University)
- P25** : Spark anodizing of titanium and its alloys in alkaline aluminate solution - Miho Nakajima, Yoshiyuki Miura, Koji Fushimi, Masayuki Takazawa, Hiroki Habazaki (Hokkaido Univ.)
- P26** : Characterization of technical conversion layers by spectroscopy and electrochemistry - S. Satinskaya, M. M. Lohrengel (University of Duesseldorf)
- P27** : Chemical conversion treatment for high corrosion resistivity on AZ31B magnesium alloy – Kohei Isobe, Takayuki Naito, Kazuma Miura, Akihiro Yamada, Yasunori Kobayashi (Industrial research Institute of Niigata prefecture)
- P28** : Characterization of alkaline dissolution of anodic oxide films formed on aluminum by EIS – Yukio Honkawa (Furukawa-Sky Aluminum Corp.), Takahiro Mizutani (Nagoya University), Tokuhiko Kobayashi, Yoichi Kojima (Furukawa-Sky Aluminum Corp.), and Masazumi Okido (Nagoya University)
- P29** : GDOES depth profiling analysis of thin passive films on molybdenum-containing stainless steel – Motonori Uemura, Takatoshi Yamamoto, Yoshitaka Aoki, Koji Fushimi, Hiroki Habazaki (Hokkaido University)
- P30** : Photoluminescence from passive films on Ni by photo-excitation of UV light - Yusuke Mito, Mikito Ueda, and Toshiaki Ohtsuka (Hokkaido University)
- P31** : Fracture of anodized Al-Li alloy with cracks in the coating by fatigue tests - Toshiro Fukushima (Fukushima Material Engineering Laboratory)
- P32** : Repassivation behavior of passive film on pure iron in borate buffer solution investigated by micro-indentation – Takatoshi Yamamoto, Koji Fushimi, Hiroki Habazaki, Hidetaka Konno (Hokkaido University)