

## Poster presentations

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- P01 Hydrogen-assisted damage evolution in dual phase steel**  
Koyama Motomichi \*, Cemal Cem Tasanr, Eiji Akiyama, Kaneaki Tsuzaki, Dierk Raabe  
Kyushu University
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- P02 Hydrogen and aluminium in twinning-induced plasticity steel**  
Dong-Woo Suh \*, D. K. Han, E. J. Song  
Pohang University of Science and Technology
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- P03 Ductile-brittle transition behavior in cast or forged duplex stainless steels**  
Tomota Yo \*, Osamu Takahashi, Yohei Shibui  
Ibaraki University
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- P04 Creep behaviour of a nickel free austenitic steel**  
Prakash Ujjwal \*, P. Rawat, DVV Satyanarayana  
IIT Roorkee
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- P05 Influence of sheared edge on hydrogen embrittlement resistance in an ultra-high strength steel sheet**  
Yoshino Masataka \*, Yuki Toji, Shusaku Takagi, Kohei Hasegawa  
JFE Steel Corporation
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- P06 The role of plasticity in hydrogen embrittlement fracture of lath martensitic steel**  
Nagao Akihide \*, Cynthia D. Smith, May L. Martin, Mohsen Dadfarnia, Petros Sofronis, Ian M. Robertson  
JFE Steel Corporation
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- P07 Relationship between microstructure of martensite and cleavage crack propagation in low-carbon steel**  
Tsuboi Mizuki \*, Akinobu Shibata, Nobuhiro Tsuji  
Kyoto University
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- P08 Improvement of strength and ductility in ferrite-martensite dual phase steels by dispersion of nano-precipitates**  
Kamikawa Naoya \*, Masahiro Hirohashi, Yu Sato, Elango Chandiran, Goro Miyamoto, Tadashi Furuhara  
Tohoku University
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- P09 Strain rate and grain size dependence of deformation behavior in a Mo-Nb microalloyed medium Mn ultrafine-grained TRIP steel**  
Cai Minghui \*, Wanjun Zhu, Bernard Rofle, Libo Pan, Qi Chao, Mohan Setty, Peter D Hodgson  
Deakin University
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- P10 The modelling of stress-strain behaviour of ferrous martensite**  
Hayashi Kunio \*, Pedro E. J. Rivera-D'az-del-Castillo  
Nippon Steel and Sumitomo Metal Corporation
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- P11 Ductile fracture criterion in cold upsetting**  
Shiga Akira \*, Junichi Ookubo, Kenji Tamura, Naoki Matsui, Yutaka Neishi, Tomohiro Yamashita, Masashi Higashida  
Nippon Steel and Sumitomo Metal Corporation
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- P12 On the relationship of microstructure and in-use properties of nanostructured bainitic steels**  
Rementeria Rosalia \*, Lucia Morales-Rivas, Inaki Garcia, Carlos Garcia-Mateo, Matthias Kuntz, Eberhard Kerscher, Rebecca Janisch, Francisca G. Caballero  
National Centre for Metallurgical Research (CENIM-CSIC)
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- P13 Deformation microstructures and fracture of a TWIP steel subjected to cold rolling**  
Kusakin Pavel \*, Andrey Belyakov, Rustam Kaibyshev, Dmitriy A. Molodov  
Belgorod State University
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- P14 Microstructures and mechanical properties of DP and TRIP steels after laboratory simulated strip casting**  
Xiong Zhiping \*, Andrii Kostryzhev, Nicole Stanford, Elena Pereloma  
University of Wollongong
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- P15 Void formation behavior in dual phase steels of low martensite volume fractions**  
Matsuno Takashi \*, Daisuke Maeda, Hiroshi Shuto, Akihiro Uenishi  
Nippon Steel & Sumitomo Metal Corporation
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- P16 Influence of grain boundary carbide on temper embrittlement**  
Nako Hidenori \*, Yoshitomi Okazaki, Hitoshi Hatano, Genichi Taniguchi, Minoru Otsu; Ken Yamashita  
Kobe Steel, Ltd.
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- P17 Finite element analyses of elasto-plastic deformation in colony structures**  
Roslan Lidyan \*, Tetsuya Ohashi, Yohei Yasuda  
Kitami Institute of Technology
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- P18 Analysis of strain hardening of ferrite-bainite dual-phase Steel**  
Yasuda Kyono \*, Hitoshi Sueyoshi, Nobuyuki Ishikawa, Tatsuya Morikawa, Kenji Higashida and Hiroshi Ikeda  
JFE Steel Corporation
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- P19 Carbide effects on hydrogen embrittlement in tempered martensitic steels**  
Lee Junmo \*, Young Jin Kwon, Taekyung Lee, Chong Soo Lee  
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- P20 Grain boundary sliding activated in ultrafine grained interstitial free steel**  
Matsunaga Tetsuya \*, Shun Itoh, Kasane Nakazawa, Yoshitaka Matsukawa, Yuhki Satoh, Hiroaki Abe  
National Institute for Materials Science
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- P21 Use of ultra-fine grains against hydrogen-induced ductility reduction in metastable austenite**  
Macadre Arnaud \*, Nobuo Nakada, Toshihiro Tsuchiyama, Setsuo Takaki  
Kyushu University
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- P22 Work hardening behaviour focused on generating dislocation around nanometer-sized carbides in ferrite Single structure hot-rolled steel**  
Kosaka Noriaki \*, Y. Funakawa  
JFE Steel Corporation
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- P23 Role of non-metallic inclusions in hydrogen-induced fracture of high-strength carbon steels**  
Yagodzinsky Yuriy \*, O. Todoshchenko, T. Saukkonen, H. Hanninen  
School of Engineering Aalto University
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- P24 Origin of uniform tensile elongation in ultra-low carbon steel with nanostructure after high-pressure torsion - straining**  
Todaka Yoshikazu \*, Takumi Otsuki, Satoshi Morooka, Stefanus Harjo, Minoru Umemoto  
Toyohashi University of Technology
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- P25 Effects of wear conditions on formation of wear-induced layer in Fe alloys**  
Sato Hisashi \*, Yuya Kaneko, Yoshimi Watanabe  
Nagoya Institute of Technology
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- P26 The intervariant crystallographic planes distribution in a lath martensite**  
Beladi Hossein \*, Gregory Rohrer, Anthony Rollett, Vahid Tari, Peter Hodgson  
Deakin University
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- P27 The boundary features in the lath martensite**  
Morito Shigekazu \*, Takuya Ohba, Tadashi Furuhara, Goro Miyamoto, Yoshitaka Adachi  
Shimane University
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- P28 Unusual plastic deformation behaviour in Fe-Ni-Al-C alloy with ultrahigh strength**  
Furuta Tadahiko \*, S. Kuramoto, K. Ohishi, T. Ohsuna, T. Komori, A. Shibata, N. Tsuji  
TOYOTA CENTRAL R&D LABS., INC.
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- P29 Grain boundary fracture of Fe-Ni-Mn alloys after 5 decades of investigation**  
Shirazi Hassan \*, S. Hossein Nedjad, M. Nili Ahmadabadi, T. Furuhara  
University of Tehran
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- P30 Improvement of fracture initiation toughness due to retained austenite in nickel bearing cryogenic steel**  
Furuya Hitoshi \*, Tetsuya Tagawa, Takashi Ishikawa  
Nippon Steel & Sumitomo Metal Corporation
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- P31 Effect of heat-affected zone softening on total elongation of spot welding in automotive ultra high strength steel sheet**  
Shimizu Yuki \*, Shunsuke Moriya, Che Man Lai Gloria, Junya Naito, Shinji Sato,  
Akihiko Nagasaka  
National Institute of Technology, Nagano College
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- P32 Alloy design of high performance low-density steels by combined TEM and computational methods**  
Gutierrez-Urrutia Ivan \*, Emmanuel Welsch, Massod Hafez Haghishat, Dierk Raabe  
National Institute for Materials Science (NIMS)
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- P33 Crystal plasticity analyses of fatigue crack initiation in bcc multicrystals**  
Sakurada Eisaku \*, Koichi Sato, Atsushi Seto, Shunji Hiwatashi  
Nippon Steel & Sumitomo Metal Corporation
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