

# Poster presentations

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**P01 Atomic scale studies on the stability of nano-sized precipitates in ferritic based lightweight Fe-Mn-Al-C alloys**

J. B. Seol\*, C. G. Park, J. H. Kwak, P. P. Choi, D. Raabe  
Max-Planck-Institut fuer Eisenforschung

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**P02 Precipitation and clustering phenomena of Cu in Fe-Cu-Ni alloy observed by aberration corrected STEM-EDS**

H. Nakamichi\*, K. Yamada, T. Yamashita, K. Sato  
JFE Steel Corporation

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**P03 First-principles study of thermodynamic and structural properties of Si-doped  $\alpha$ -Fe**

Arkapol Saengdeejing\*, Ying Chen, Ken Suzuki, Hideo Miura, Tetsuo Mohri  
Tohoku University

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**P04 First-principles approach to the nature of light elements dissolved in  $\alpha$  iron**

Maaouia Souissi\*, Ying Chen, Hiroshi Numakura  
Osaka Prefecture University

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**P05 Effect of Nb addition on precipitation hardening of high V added medium carbon steels**

Elijah Kakiuchi\*, Toshio Murakami, Takeshi Arikawa, Hideki Kakimoto, Takashi Choda, Hitoshi Hatano  
Kobe Steel, Ltd.

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**P06 Carbon redistribution in a quenched and partitioned steel analysed by atom probe tomography**

M. J. Santofimia\*, L. Zhao, I. Povstugar, P.-P. Choi, D. Raabe, J. Sietsma  
Delft University of Technology

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**P07 Effects of Mo and B addition on bainite transformation in low-carbon low-alloy steels**

Tadashi Furuhara\*, Kenji Takahashi, Naoki Takayama, Goro Miyamoto, Taishi Fujishiro, Masanori Minagawa  
Tohoku University

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**P08 The effect of molybdenum on Nb,Ti(C,N) precipitate evolution and grain refinement in a high-temperature carburizing steel**

C. M. Enloe\*, J. G. Speer, K. O. Findley  
Colorado School of Mines

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**P09 Role of initial microstructure and multi-scale chemical inhomogeneity on microstructure evolution in flash processed steels**

B. Hanhold\*, T. Lolla, G. Cola, S. S. Babu  
The Ohio State University

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**P10 Segregation and precipitation of carbon in the vicinity of dislocations during strain aging in low carbon steels**

Naoki Maruyama\*, Manabu Takahashi  
Nippon Steel Corporation

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**P11 Relationship between hydrogen-related crack propagation and microstructure of martensite in low carbon martensitic steel**

Akinobu Shibata\*, Hiroshi Takahashi, Nobuhiro Tsuji  
Kyoto University

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**P12 Yield point phenomenon in Ni bearing IF steel**

Daichi Akama\*, Akira Hironaka, Nobuo Nakada, Toshihiro Tuchiyama, Setsuo Takaki  
Kyushu University

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**P13 The effect of uniform distribution of fine cementite on hydrogen embrittlement of low carbon martensitic steel plates**

Akihide Nagao\*, Kenji Hayashi, Kenji Oi, Shinji Mitao  
JFE Steel Corporation

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**P14 Simulation studies on Cottrell locking using phase-field method**

Hiroshi Kaido\*, Koji Moriguchi  
Sumitomo Metal Industries, Ltd

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**P15 Effect of grain boundary on the strain aging behavior in Nb-bearing ultra-low-carbon steel sheets**

Yoshihiko Ono\*, Kaneharu Okuda, Yoshimasa Funakawa, Kazuhiro Seto  
JFE Steel Corporation

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- P16 Evaluation of hydrogen embrittlement susceptibility by electrochemical nanoindentation**  
Kota Tomatsu\*, Kaori Miyata  
Sumitomo Metal Industries, Ltd
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- P17 High cycle fatigue fracture of V-added ferrite-pearlite type microalloyed steels**  
Satoshi Morooka\*, Daisuke Tajiri, Osamu Umezawa  
Yokohama National University
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- P18 The distribution of dislocations of the lath martensite in low carbon steel**  
Shigekazu Morito\*, Soichiro Omura, Kouji Nashiki, Takuya Ohba, Taisuke Hayashi  
Shimane University
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- P19 Formation process of wear-induced layer in Fe-33%Ni alloy**  
Hisashi Sato\*, Yuuki Fuseya, Takahiro Kunimine, Yoshimi Watanabe  
Nagoya Institute of Technology
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- P20 Effect of solute carbon on high speed deformation of Hadfield steel**  
Rintaro Ueji\*, Tatsuya Yoshisako, Yoshikazu Todaka, Takashi Mizuguchi, Yasuhiro Tanaka, Kazunari Shinagawa  
Kagawa University
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- P21 Influence of punching velocity in small punch test on hydrogen embrittlement in ultra-low carbon steel with ultra-high density lattice defects**  
Yoshikazu Todaka\*, Kazunobu Morisako, Yoshihisa Matsumoto, Rintaro Ueji, Akio Otsuka, Minoru Umemoto  
Toyohashi University of Technology
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- P22 The interaction of twins and V<sub>4</sub>C<sub>3</sub> carbides in a Fe-22Mn-0.6C-0.9V alloy**  
Hung-Wei Yen\*, Mingxin Huang, Colin P. Scott, Jer-Ren Yang  
National Taiwan University
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- P23 Indentation-induced plasticity of steels with various lattice defects**  
Takahito Ohmura\*, Ling Zhang, Kaoru Sekido, Kaneaki Tsuzaki  
National Institute for Materials Science
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- P24 Time-resolved in-situ analysis of delta-ferrite precipitation with austenite grain growth during intercritical annealing**  
X. F. Zhang\*, H. Terasaki, Y. Komizo, T. Yokota, K. Yasuda  
Osaka University
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- P25 Development of electric resistance welded steel tube with excellent electromagnetic properties by crystal texture control in hot stretch reducing process**  
Masatoshi Aratani\*, Yasuhide Ishiguro, Masayoshi Ishida, Yoshikazu Kawabata, Shinsaku Kokubo  
JFE Steel Corporation
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- P26 Lattice defects in plastically deformed single crystals of iron base alloys studied by positron probe microanalysis**  
Eui Pyo Kwon, Shigeru Suzuki\*, Satoshi Jinno, Masanori Fujinami  
Tohoku University
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- P27 Phase transformations in SUS304 deformed by HPT**  
I. Shuro\*, H. H. Kuo, Y. Todaka, M. Umemoto  
Toyohashi University of Technology
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- P28 Strength-ductility balance of ultrahigh strength Fe-Ni based alloys**  
T. Furuta\*, S. Kuramoto, N. Nagasako, T. Osuna  
Toyota Central R&D Laboratories Inc
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- P29 First-principles study of interface structure and energy of Fe/NbC**  
H. Sawada\*, K. Kawakami, T. Ozaki  
Nippon Steel Corporation
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- P30 Improvements in the thermodynamic descriptions of the Fe-based systems**  
Taichi Abe\*, Kiyoshi Hashimoto, Yukiko Sawada, Cenk Kocer, Kazuhisa Shobu, Mauro Palumbo, Suzana G. Fries, Masato Shimono, Kaneaki Tsuzaki  
National Institute for Materials Science
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- P31 High strength and ductility in a harmonic SUS329J1 duplex steel**  
Octav Ciucă\*, Shan Deng, Kei Ameyama  
Ritsumeikan University
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**P32 Effects of carbon on magnetic properties and transformed structures in Fe-based alloys**

H. Ohtsuka\*, V. A. Dinh, T. Ohno, K. Tsuzaki, H. Suzuki, H. Kitazawa

National Institute for Materials Science

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**P33 Microstructure of high chromium martensitic steels embrittled by low temperature reheating**

Yusaku Tomio\*, Hirokazu Okada, Kazuhiro Hono

Sumitomo Metal Industries, Ltd

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**P34 D-STEM combined with precession microscopy for nanoscale crystal orientation and phase mapping**

K. J. Ganesh, S. Rajasekhara, D. Bultreys, K. Hattar, J. A. Knapp, Paulo Ferriera\*

University of Texas at Austin

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**P35 Improved method for determining the elastic modulus of a highly plastic material by nanoindentation**

Naoki Fujisawa

Hysitron, Inc.

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