

Symposium P : 4th KIM-CSM symposium: New Metal Materials: Low-carbon emission, New energy vehicles & Lightweights

Session Title : New Metal Forming Process & Properties (P1)

Time : 09:00 -10:40, Nov. 23

Room # : 401, 4F

Session Chair : Opening - Hyoungwook Kim, Korea Institute of Materials Science
ShiHoon Choi, Sunchon National University

09:00 – 09:10 **Opening Ceremony**

Welcome Message

KIM President, CSM president (Video)

09:10 – 09:40 **Keynote** **I-P0819**

Electric Current Assisted Processing and its Mechanism

Heung Nam Han, Seoul National University, KIM

09:40 – 10:00 **Invited** **I-P0829**

Crash Cracking Index and Hydrogen Embrittlement Mechanisms of Hot Stamping Components

Hongzhou Lu, CITIC Metal Co., LTD, CSM

10:00 – 10:20 **Invited** **I-P0000**

Elasto-visco-plastic self-consistent polycrystal model for finite element simulations of bending and springback

Youngung Jeong, Changwon National University, KIM

10:20 – 10:40 **Invited** **I-P1013**

Al-Si Coated Press Hardened Steel with Improved Bendability

Hongliang Yi, Northeastern University, CSM

Session Title : Green Metal Forming & Properties (P2)

Time : 10:50 -12:10, Nov. 23

Room # : 401, 4F

Session Chair : Hongzhou Lu, CITIC Metal Co., LTD

10:50 – 11:10 **Invited** **I-P0000**

Simulating cyclic loading behaviour of a magnesium alloy at elevated temperature

Hyuk Jong Bong, Korea Institute of Materials Science, KIM

11:10 – 11:30 **Invited** **I-P0909**

The hydrogen embrittlement behaviours of micro-alloyed press hardened steel: mechanical property, microstructure characterization and modelling

Yan Zhao, Beijing Institute of Technology Chongqing Innovation Center, CSM

11:30 – 11:50 **Invited**

I-P0996

Deciphering the effect of initial texture on the hemming performance of AA5083 aluminum alloy

ShiHoon Choi, Suncheon National University, KIM

11:50 – 12:10 **Invited**

I-P0872

Latest Progress of Light weight and Low CO2 Emission Solutions for New Electric Vehicle

Fei Han, Automotive Steel Institute, CSM

Session Title : New Metals for Light weightening (P3)

Time : 13:40 -15:20, Nov. 23

Room # : 401, 4F

Session Chair : Hyoungwook Kim, Korea Institute of Materials Science

13:40 – 14:00 **Invited**

I-P0896

The New Challenge and Replying Strategy of Early Vendor Involvement Solutions of Automotive Materials with the Goal of Carbon Neutrality

Jia Zhou, China Automotive Engineering Research Institute Co., Ltd, CSM

14:00 – 14:20 **Invited**

I-P0833

Improvement of corrosion resistance of SEN Mg alloys

Bong Sun You, Korea Institute of Materials Science, KIM

14:20 – 14:40 **Invited**

I-P0885

Exploration and research on key technologies of green low-carbon manufacturing for automobile aluminum alloy components under the vision of low-carbon emission

Yu Wang, CITIC Dicastal Co.,Ltd, CSM

14:40 – 15:00 **Invited**

I-P0989

Eco-friendly high strength Al-Zn-Mg-Cu alloy sheets for automobile body application

Hyoungwook Kim, Korea Institute of Materials Science, KIM

15:00 – 15:20 **Invited**

I-P0947

Precipitation behaviour of Al-7Si-0.35Mg casting alloy during T5 heat treatment

Young-Hee Cho, Korea Institute of Materials Science, KIM