On/Offline Poster Session 3

Wednesday, October 6, 2021

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[Online] On-demands

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Chemically Cleavable 2D Organic-Inorganic Hybrid Magnets
Ki-Yeon Kim, Garam Park (KAERI, Korea), Jaehun Cho, Joonwoo Kim, June-Seo Kim, Jinyong Jung, Kwonjin Park, Chun-Yeol You (DGIST, Korea), and In-Hwan Oh (KAERI, Korea)

[P-05-002] 05_1118
Tellurium Doping in Two-Dimensional MoS₂ for PMOS Field-Effect Transistor with High Performances
Guen Hyung Oh and Tae Wan Kim (Jeonbuk Nat’l Univ., Korea)

[P-05-003] 05_1208
Thermally Stable PtTe₂ as Chemically Assembled Edge Contact Electrodes for Atomic Transistor
Seunguk Song, Jihoon Yang, Aram Yoon, Sora Jang, Jaewon Wang, Yeoseon Sim, Zonghoon Lee, and Soon-Yong Kwon (UNIST, Korea)

[P-05-004] 05_1421
Modulated Chemical Doping of Monolayer Transition Metal Dichalcogenides
Jaewon Kim, Swati Singh, Mieun Son, and Joonki Suh (UNIST, Korea)

[P-05-005] [Offline] 05_1555
2D Ti₃C₂Tx Hybrid Films Containing High-Concentration B4C with Excellent Neutron Radiation Shielding
Ju-Hyoung Han, Shi-Hyun Seok, Young Ho Jin, Jaewon Wang, Jaeeun Park, and Soon-Yong Kwon (UNIST, Korea)

[P-05-006] 05_1618
Graphene Multi-via Contacts for 3D Integration of 2D Devices
Yongjun Shin, Gwan-Hyoung Lee (Seoul Nat’l Univ., Korea), and Junyoung Kwon (Yonsei Univ., Korea)
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**[P-05-007]**

05_1622

Wafer-Scale Homogeneous Growth of High-Quality Tungsten Disulfides via Surfactant-Assisted Metal-Organic Chemical Vapor Deposition

Do Hyoung Koo, Hee Seong Kang, and Chul-Ho Lee (KU-KIST Graduate School of Converging Sci. and Tech., Korea Univ., Korea)

**[P-05-008]**

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Effect of Photoresist Encapsulation on Multilayer MoS2 Transistors

Hyeyeon Sunwoo and Woong Choi (Kookmin Univ., Korea)

**[P-05-009]**

[Offline] 05_1674

Electrical Properties of WS2 Metal-Oxide-Semiconductor Capacitors

Mingu Ji, Seungju Baik, and Woong Choi (Kookmin Univ., Korea)

**[P-05-010]**

[Offline] 05_1685

Schottky Barrier Variable Graphene/MoS2 Heterojunction Based Highly Sensitive FET Biosensor

Yea Hyun Kim and Woo Jong Yu (Sungkyunkwan Univ., Korea)

**[P-05-011]**

[Offline] 05_1692

A Study on the Structural Change of Boron Doped Graphite and De Doped Graphite through High Pressure

Min Kang, Yoong Ahm Kim, Go Bong Choi, and Ju Eun Choi (Chonnam Nat’l Univ., Korea)

**[P-05-012]**

[Offline] 05_1698

Interfacial-Induced Ketamine Sensing Using Single-Layer Graphene

JiHun Sim and WooJong Yu (Sungkyunkwan Univ., Korea)

**[P-05-013]**

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Anisotropic and Top-Down Cu Intercalation in Black Phosphorus Forming Angstrom-Wide Conductive Channels

Suk Woo Lee, Lu Qiu, Jong Chan Yoon (IBS, Korea and UNIST Korea), Yohan Kim (UNIST, Korea), Da Li (IBS, Korea), Inseon Oh (UNIST, Korea), Gil-Ho Lee (POSTECH, Korea), Jung-Woo Yoo (UNIST, Korea), Hyung-Joon Shin, Feng Ding, and Zonghoon Lee (IBS and UNIST, Korea)
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Sungbum Park and Woojong Yu (Sungkyunkwan Univ., Korea)

[P-05-015] [Offline] 05_1812
High Aspect Ratio Non-Oxidized Graphene and Graphene Oxide Composite Sheet by Assisted GO with Shear Exfoliation
Sulhwa Choi, Gyoyeon Byun, Eunjung Choi, Kyoung Jeong Bae, and Chang Su Yeo (KB-Element Co., Ltd., Korea)

[P-05-016] [Offline] 05_1816
Synthesis of Defect-Free Few-Layer Non-Oxidized Graphene by Electrochemical Exfoliation with Antioxidant
Gyoyeon Byun, Sulhwa Choi, Eunjung Choi, Kyoung Jeong Bae, and Chang Su Yeo (KB-Element Co., Ltd., Korea)

[P-05-017] 05_1823
Monolithic Interface Contact Engineering to Boost Optoelectronic Performances of 2D Semiconductor Photovoltaic Heterojunctions
Seunghoon Yang (Korea Univ., Korea), Janghwan Cha (Sejong Univ., Korea), Jong Chan Kim (UNIST, Korea), Woong Huh, Donghun Lee, Yoon Seok Kim, Seong Won Lee, Hong-Gyu Park (Korea Univ., Korea), Hu Young Jeong (UNIST, Korea), Suklyun Hong (Sejong Univ., Korea), Gwan-Hyoung Lee (Seoul Nat’l Univ., Korea), and Chul-Ho Lee (Korea Univ., Korea)

[P-05-018] 05_1900
Deformable Carbon Atomic Film Based Etching Mask
Jiwoo Kim and Gwan-Hyoung Lee (Seoul Nat’l Univ., Korea)

[P-05-019] 05_1919
Electrolyte-Gated Vertical Synapse based on Graphene/Tungsten Diselenide (WSe₂) Heterojunction
Ju-Hee Lee and Jin-Hong Park (Sungkyunkwan Univ., Korea)
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**[P-05-020]**

05_1934

Anisotropic Strain and Doping of Graphene by Epitaxially Grown MoO$_3$


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**[P-05-021]**

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Surface Activated Violet Phosphorus / Black Phosphorus Allotropes Heterostructure Photocatalyst for Hydrogen Evolution

Rak Hyun Jeong, Ji Won Lee, Dong In Kim, Seong Park, and Jin-Hyo Boo *(Sungkyunkwan Univ., Korea)*

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**[P-05-022]**

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Enhanced Thermophysical Properties of Graphene on Metal Substrate

Hwan Soo Dow *(KICET, Korea)*, Hae-In Moon, and Jung Woo Lee *(Pusan Nat'l Univ., Korea)*

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Selective Area Growth of WSe$_2$ on SiO$_2$ Surface between Patterned Graphene Layers

Seung Won Lee, Hyo-Bae Kim, You-Kyoung Oh, Min Ji Jeong, and Ji-Hoon Ahn *(Hanyang Univ., Korea)*

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**[P-05-024]**

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Morphology Controllable Growth of Wafer-Scale MoS$_2$ Thin Films by Pulsed Metal-Organic Chemical Vapor Deposition at Low Temperature

Jeong-Hun Choi and Ji-Hoon Ahn *(Hanyang Univ., Korea)*

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**[P-06-001]**

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Improvement of Mechanical Properties and Corrosion Resistance of Al-Si Based Alloys with Rare Earth Elements Lanthanum

Uro Heo, Chan Bin Mo, Ki Beom Park, Hyo-Kyu Kim, Dong-Woon Han, Jang-Won Kang, Hyung-Ki Park, and Seongtak Kim *(KITECH, Korea)*
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High Temperature Hardness of Ti-Al-Dy Alloy by High Energy Ball Milling and Spark Plasma Sintering
Si Young Chang, Yuri Kim, Hoseong Rhee, and Hyunseung Lee (Korea Aerospace Univ., Korea)

[P-06-003] 06_1234
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[P-06-004] 06_1236
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[P-06-005] 06_1237
Effect of Wobble Motion on Mechanical Properties and Microstructure of Laser Lap Weldments with AlMg7 Alloy Sheets
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[P-06-006] 06_1263
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[P-06-007] [Offline] 06_1279
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Ik-Jae Lee, Hee Seob Kim, Young Duck Yun, Seen-Woong Kang, Hyo-Yun Kim, Hyuk Chae Kwon, and Younghak Kim (Pohang Accelerator Lab., Korea)

Synthesis and Mechanical Properties of CoCrFeNi-TiN/CoCrFeNi Laminates with Tailored Microstructure
Muhammad Aneeq Haq (Univ. of Sci. and Tech., Korea), Yoseb Song, Da-Woon Jeong (KITECH, Korea), Jeong Gon Kim (Incheon Nat’l Univ., Korea), and Bum Sung Kim (KITECH, Korea)

Analysis of Microstructure and Mechanical Properties of Low-High Thermal Expansion Alloys by Annealing Condition
Woo-Bin Jo, Hyo-Sang Yoo, Cheol-Woo Kim, Jun-Hee Han (KITECH, Korea), Jin-Kyu Lee, Gi-An Song (Kongju Nat’l Univ., Korea), Dae-Geun Kim (Inst. for Advanced Engineering, Korea), Han-Cheol Choe (Chosun Univ., Korea), and Jae-Yeol Jeon (KITECH, Korea)

Effects of Trace Elements on Microstructure, Mechanical Properties, Electric and Thermal Conductivity of the Al-Sb Based Alloys
Hyeon-Taek Son, Yong-Ho Kim, Byeong-Kwon Lee, and Hyo-Sang Yoo (KITECH, Korea)

Improvement of Wear Resistivity of High Entropy Alloy during Selective Nitriding Heat Treatment
Jong In Choi, Gyu Byeong Kang (KITECH, Korea), Jongun Moon, Hyoung Seop Kim (POSTECH, Korea), and Tae-Wook Na (KITECH, Korea)

Microstructure and Mechanical Properties of the Al-Li-RE Alloy with Mg Addition
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Jungyu Park, Chami Jeon, Heejeong Kim, Jeongmin Lee, and Ilguk Jo (Dong-Eui Univ., Korea)

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Effect of Heat Treatment on Wear Behavior of TiC/AISI1020 Metal Matrix Composite
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A Study on the Optimization of Welding Sequence of Diesel Particulate Filter for Agriculture Machine
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Jin Hee Kim and Jong Hun Han (Chonnam Nat’l Univ., Korea)

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Synthesis and Photoluminescence Properties of Sm^{3+} Doped Ca_2NbLaO_6 Red-Emitting Phosphors
Anqi Zhang, Fuqiang Li, Sung Heum Park, and Jung Hyun Jeong (Pukyong Nat’l Univ., Korea)

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Prediction and Characterization of Mn Precipitation in Al-Mn Alloy Melts with Silica
Jin-Kyu Lee, Sun-Ki Kim (NICE LMS Co., Ltd., Korea), Young-Kyun Kim (Inst. for Advanced Engineering, Korea), Seong-Ho Ha, and Abdul Wahid Shah (KITECH, Korea)

[P-06-025] [Offline] 06_1763
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Seong-Ho Ha, Abdul Wahid Shah, Bong-Hwan Kim, Young-Ok Yoon, Hyun-Kyu Lim, and Shae K. Kim (KITECH, Korea)
[P-06-026] 06_1793
Influence of Iron on Reduction of Silica and Precipitation in Al-Mg Alloy Melts with Silica
Youngkyun Kim (IAE, Korea), Jinkyu Lee (NICELMS Co., Ltd., Korea), Seongho Ha, and Shah Abdul Wahid (KITECH, Korea)

[P-06-027] 06_1945
Effect of Additional Elements on the Deformation Mechanism of γ-TiAl Studied by an In Situ Transmission Electron Microscopy
Seong-Woong Kim (KIMS, Korea), Ji Young Kim (KIMS and Seoul Nat’l Univ., Korea), Taegu Lee, Seung-Hwa Ryu (KAIST, Korea), and Seung Eon Kim (KIMS, Korea)

[P-06-028] 06_1961
Microstructure and Texture of Multi-Stack ARB and Subsequently Annealed a Nanostructured Complex Aluminum Alloy
Sang-Hyeon Jo and Seong-Hee Lee (Mokpo Nat’l Univ., Korea)

[P-06-029] [Offline] 06_1966
Control of Amphiphilic Properties of Silica-Coated Glass Surface using Plasma Treatment
Van-Tuan Nguyen, Oleksii Omelianovych, Viet Anh Cao, and Ho-Suk Choi (Chungnam Nat’l Univ., Korea)

[P-06-030] 06_1970
Enhanced Photocatalytic Performance of Rod-Shaped Na₂Ti₆O₁₃ by a Facile One-Step Process
Duk-Hee Lee, Chan-Gi Lee, and Kyung-Soo Park (Inst. for Advanced Engineering, Korea)

[P-06-031] 06_1988
Effect of Casting Method on Mechanical and Corrosion Properties of Commercial Al-10Si and Al-10Si-2Cu Alloy
Seongtak Kim, Uro Heo, Ki Beom Park, Hyo-Kyu Kim, Dong-Woon Han, Jang-Won Kang, Hyung-Ki Park, and Chanbin Mo (KITECH, Korea)
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Controllable One-Pot Wet Chemical Synthesis and Enhanced Photocatalytic Performance of TiO₂ Nanostructures using Ammonium Hexafluorotitanate
Duk-Hee Lee, Chan-Gi Lee, and Kyung-Soo Park (Inst. for Advanced Engineering, Korea)

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Baohai Pan and Kyung Jin Lee (Chungnam Nat’l Univ., Korea)

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Guk-Hwan Lee and Wonoh Lee (Chonnam Nat’l Univ., Korea)

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Tae Hyeon Kim, Ju Ang Kim, and Taek Seung Lee (Chungnam Nat’l Univ., Korea)

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<td>Jong-Goo Park, Kyoung Ha Min, and Ki-Ha Hong (Hanbat Nat’l Univ., Korea)</td>
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<td>Computational Design of the Charge Transport Layers in Sn-Based Perovskite Solar Cells through TCAD Simulation</td>
<td>Minju Song, Jong-Goo Park, and Ki-Ha Hong (Hanbat Nat’l Univ., Korea)</td>
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<td>Investigating the Effect of Heterogeneously Crosslinked Structure on Mechanical Behavior of Epoxy using Molecular Dynamics</td>
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<td>[P-07-004]</td>
<td>DFT Study for CO Oxidation over Au Nanoparticles Supported on CeO₂ under Catalytic Reaction Condition</td>
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<td>Preferential Oxidation of CO under H₂-rich Conditions Catalyzed by Pt Single-Atoms</td>
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Mean-Field QM/MM Modeling for Seamless Pauli Repulsion
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[P-07-008] 07_1623
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Mosab Banisalman and Sangsoo Han (KIST, Korea)

[P-07-009] 07_1733
Multiscale Simulation Approach to Investigate the π–Interaction in Water
Dooam Paik and Hyungjun Kim (KAIST, Korea)

[P-07-010] 07_1760
Analysis of the Predicted Mechanical Properties of the Directionally Solidified TiAl Alloy using Random Forest Regression Algorithm
Seungmi Kwak (Harbin Inst. of Tech., China), Jaehwang Kim (KITECH, Korea), Hongsheng Ding, and Xuesong Xu (Harbin Inst. of Tech., China)

[P-07-011] 07_1830
Comparison of Oxidative Ethane Hydrogenation Reactivity over NiO(100), NiO(110) and NiO(111) Facets: by DFT Calculations
Won Bo Lee, Yeonjoo Shim, and Hyo Seok Kim (Seoul Nat’l Univ., Korea)

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First Principle Calculations of Hydrogen Evolution Reaction in Multi Elemental Catalysts
Min Hee Park, Seung Jae Kwak, Min Young Ha (Seoul Nat’l Univ., Korea), YongJoo Kim (Kookmin Univ., Korea), and Won Bo Lee (Seoul Nat’l Univ., Korea)
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Reaction Mechanism of Dimethyl Ether Carbonylation to Methyl Acetate over Ferrierite Zeolite: a First-Principles Study
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Catalytic Reactivity of Nb-Doped NiO (111) Surface: First-Principles Study
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Chemisorption of Hafnium Precursors on Hydroxylated Si(100) Surface: a DFT Study
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Jeongrae Kim (KIST, Korea), Doosun Hong (KAIST, Korea), Donghun Kim, and Sang Soo Han (KIST, Korea)

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Sea-Bottom Profile Image Classification using Object Detection-Artificial Intelligence
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[P-08-002] 08_1023
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Advanced Area-Selective Atomic Layer Deposition through the Discrete Feeding of Short-Chain Inhibitor Molecules
Jeong-Min Lee, Jinseon Lee, Ji Won Han, Tae Joo Park, and Woo-Hee Kim (Hanyang Univ., Korea)

[P-08-006] 
Influence of Laser Scanning Parameters on Defect Formation and Tensile Properties of Inconel 625 Fabricated by Selective Laser Melting
Yeonghwan Song, Kyuntaek Cho, and Byoungsoo Lee (KITECH, Korea)

[P-08-007] 
Dry Synthesis and Patterning Process of Luminescent Graphene Quantum Dots by Ion-Beam Assisted Chemical Vapor Deposition
Jun Mok Ha (KAERI, Korea), Na Eun Lee (KAIST, Korea), Young Jun Yoon (KAERI, Korea), Seoung Ho Lee (Univ. of Sci. and Tech., Korea), Yong Seok Hwang, Jae Kwon Suk, Chan Young Lee, Cho Rong Kim, and Sunmog Yeo (KAERI, Korea)

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All-Inkjet-Printed Multilayer Flexible Piezoelectric Generator made of BaTiO₃ Hybrid Material
Seong Guk Jeong, Seok Bin Kwon, Jung Hyeon Yoo, Hyung Wook Choi, Dong In Jeong, Ji Won Kim, and Dae Ho Yoon (Sungkyunkwan Univ., Korea)

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Noise Analysis on Charge Transport in Molecular Electronic Devices
Kyungjin Lim and Hyunwook Song (Kyung Hee Univ., Korea)

[P-08-010] 
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Jae-Young Park (KITECH, Korea and Seoul Nat’l Univ., Korea), Kwangsup Park, Bosung Seo, Tae-Wook Na, Ki Beom Park, Hyeon-Tae Im (KITECH, Korea), Nong-Moon Hwang (Seoul Nat’l Univ., Korea), and Hyung-Ki Park (KITECH, Korea)
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[P-08-011]  
**One-Step Synthesis of Conductive Polymer Films by in-Situ Doped Atmospheric Pressure Plasma Polymerization**

Jae Young Kim, Hyo Jun Jang, Eun Young Jung, Habeeb Suleiman, and Heung-Sik Tae (Kyungpook Nat’l Univ., Korea)

[P-08-012]  
**Effect of Ta on Corrosion Properties of Corrosion Resistant Titanium Alloys**

Bosung Seo, Hyung-Ki Park, Ki Beom Park, Hyo-Kyu Kim, and Kwangsuk Park (KITECH, Korea)

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Bo-Kyung Choi, Woong-Ki Choi, and Min-Kang Seo (Korea Carbon Industry Promotion Agency, Korea)

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**One-Flow Upscaling Neutralization of Organophosphonate Derived Pesticide/Nerve Agent Simulant to Value-Added-Chemicals in Novel Teflon Microreactor Platform**

Se-Jun Yim, Brijesh M. Sharma, Arun Nikam, Gwang-Noh Ahn, and Dong-Pyo Kim (POSTECH, Korea)

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**Phase Controlling of Fe$_2$O$_3$ Nanoparticle Encapsulated in SiO$_2$ by Sintering Temperature**

Jong-Ryul Jeong, Phuoc Cao Van, and Thi Trinh Nguyen (Chungnam Nat’l Univ., Korea)

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**Fretting Wear Resistance of 3D-Printed Inconel 625**

Jung-Hwan Park, Young-Ho Lee, Yang-II Jung, Dong-Jun Park, and Hyung-Gil Kim (KAERI, Korea)
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Microstructural Evolution and Mechanical Property of Double Coating using Atmospheric Plasma Spray

Jae Hwang Kim, Min Young Song, Daehan Kim, Kwang Jin Lee (KITECH, Korea), Jang-Woo Han (Kumoh Nat’l Inst. of Tech., Korea), Young Geun Lee, and Jong Kweon Lee (Sewon Hardfacing Co., Ltd., Korea)

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Inwoo Nam, Dokun Kim, and Byeongjin Yeang (KITECH, Korea)

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Photocatalytic Hydrogen Evolution of CuO-NiO Nanocomposite by In-Situ Liquid Cell TEM

Karthik Kannan (Kumoh Nat’l Inst. of Tech., Korea), V. Navakoteswara Rao (Nat’l Nanofab Center, Korea), Van-Quyet Nguyen, Hyung Jun Park (Kumoh Nat’l Inst. of Tech., Korea), Jun Mo Yang (Nat’l Nanofab Center, Korea), Chang Hun Lee, and Bee Lyong Yang (Kumoh Nat’l Inst. of Tech., Korea)

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Photocatalytic Water Splitting Behavior of TiO₂ based by In Situ Liquid Cell TEM

Van-Quyet Nguyen, Bee Lyong Yang, Karthik Kannan (Kumoh Nat’l Inst. of Tech., Korea), V. Navakoteswara Rao (Nat’l Nanofab Center, Korea), Na Young Kwan (Kumoh Nat’l Inst. of Tech., Korea), and Jun Mo Yang (Nat’l Nanofab Center, Korea)

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Bioengineered CdS Nanoparticles for Photocatalytic Reduction of CO₂

Bee Lyong Yang, Karthik Kannan (Kumoh Nat’l Inst. of Tech., Korea), V. Navakoteswara Rao (Nat’l Nanofab Center, Korea), Van-Quyet Nguyen, Ju Young Lee (Kumoh Nat’l Inst. of Tech., Korea), and J. M. Yang (Nat’l Nanofab Center, Korea)

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Kwang-Seok Kim and Myounghun Kim (KITECH, Korea)

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Fengwu Liu, Eunhye Yang, and Sung Heum Park (Pukyong Nat’l Univ., Korea)

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Tanisara Noinonmueng, Thanophon Kansaard, Wanichaya Mekprasart, Kanokthip Boonyarattanakalin, Kanoknan Phacheerak, and Wisanu Pecharapa (KMITL, Thailand)

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Lim Jae-Won, Cho Seongjae, and Kim Taeheon (Jeonbuk Nat’l Univ., Korea)

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