

Curriculum Vitae

Name **Jeoung Han Kim**
Date of Birth **March 8, 1975**
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1. EDUCATIONAL BACKGROUND

Course	University	Period	Department
B.S.	Korea Univ.	Mar. 1994 ~ Feb. 1999	Metall. Eng.
M.S.	POSTECH	Mar. 1999 ~ Feb. 2001	Mater. Sci. Eng.
Ph.D.	POSTECH	Mar. 2001 ~ Feb. 2005	Mater. Sci. Eng.

2. PROFESSIONAL EXPERIENCES

Affiliation	Status	Period	Department
Hanbat National University	Full Professor	Apr. 2021 ~ present	Department of Materials Science & Engineering
Hanbat National University	Assistant ~Associate Professor	Mar. 2014 ~ Sep. 2017	Department of Materials Science & Engineering
Korea Institute of Materials Science	Senior researcher.	Mar. 2005 ~ Mar. 2014	Structural Material Division
Oak Ridge National Laboratory	Visiting scholar	Sep. 2009 ~ Dec. 2010	Nuclear Material Science and Technology

University of California at Santa Barbara	Visiting scholar	Feb. 2020 ~ Sep. 2020	Department of Materials Science & Engineering (Prof. G.R. Odette group)
한국연구재단	전문위원	Jan. 2020~ June. 2023	
대한금속재료학회	재무간사	Jan. 2016 ~ Dec. 2016	Korean Institute of Metals and Materials
대한금속재료학회지	편집위원	Jan. 2018 ~ present	
한국분말야금학회	편집이사	Jan. 2018 ~ present	Korean Powder Metallurgy & Materials Institute
	계산과학/첨단분석 분과위원장	Apr. 2024 ~ present	
Trends in Metals & Materials Engineering	Editorial board member	Mar. 2012 ~ Dec. 2013	
International Journal of Metallurgical & Materials Engineering	Editorial board member	Jan. 2015~ present	
Journal of Composites Science	Editorial board member	Jan. 2021~ present	
Frontiers in Materials Science	Associate Editor	Jan. 2022~ present	

3. Research interests

A. Materials Processing and Manufacturing

- Direct bonding of metal to polymer
- Development of advanced ODS (oxide dispersion strengthened) alloys
- Additive manufacturing of multi materials
- Dissimilar welding or joining

B. Characterization Techniques

- Small angle neutron scattering
- XRD Rietveld refining
- Atom probe tomography

C. Computational Modeling of Materials

- FEM (Deform 2D/3D, Simulfact welding)
- Artificial neural network

4. INTERNATIONAL JOURNAL PUBLICATION (SCI or SCI-E)

(2024)

1. Jungsu Bin, Hyunbae Gee, Taesung Park, UiJun Go, Jeoung Han Kim✉ Youn-Seoung Lee✉, "Composites of equiatomic Y, La, Ce, Nd, and Gd rare earth oxides: Chemical-shift effects and valence spectra" **Current Applied Physics**, vol. 59 (2024) 85-94
2. Ui Jun Ko , Ju Hyeong Jung, Jung Hyun Kang, Kyunsuk Choi✉, and Jeoung Han Kim✉, "Enhanced Microstructure and Wear Resistance of Ti–6Al–4V Alloy with Vanadium Carbide Coating via Directed Energy Deposition" **Materials**, vol.17 (2024) 733.

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1. Andrews Nsiah Ashong, Barton Mensah Arkhurst, Seung-Min Yang, Taesung Park, Sanghoon Noh, Hye Jung Chang, Jeoung Han Kim✉, "Effect of radio-frequency plasma spheroidization on the microstructure and mechanical properties of 10Cr ferritic oxide dispersion-strengthened steel", **Materials Science and Engineering A**, vol. 863, (2023) 144528.
2. Chan Woong Park, Raj Narayan Hajra, Nana Kwabena Adomako, Woong Choo, Seung-Min Yang, Seok-Jun Seo✉, Jeoung Han Kim✉, "Additive manufacturing of Ti-6Al-4V/V-interlayer/17-PH steel functionally graded material using angular and spheroidal V powders" **Materials Letters** , vol. 337, (2023) 133936.
3. Giseung Shin, Marzieh Ebrahimian, Nana Kwabena Adomako, Haneul Choi, Dong Jun Lee, Ji-Hyun Yoon, Dae Whan Kim, Jun-Yun Kang, Min Young Na, Hye Jung Chang✉, Jeoung Han Kim✉ "Microstructural evolution and mechanical properties of functionally graded austenitic–low-carbon steel produced via directed energy deposition" **Materials and Design**, vol. 227 (2023) 111681.

4. Woong Choo, Marzieh Ebrahimian✉, Kyunsuk Choi, Jeoung Han Kim✉, "Influence of Heat Treatment on the Microstructure and Hardness of 17-4PH Stainless Steel Fabricated Through Direct Energy Deposition", **Metals and Materials International**, vol. 29, (2023).
5. Raj Narayan Hajra✉, Manmath Kumar Dash, Woong Chu, A. N. Singh, Kyung-Wan Nam, Jeoung Han Kim✉, "High-temperature phase stability, $\gamma \rightarrow \delta$ transformation of ferritic/martensitic steel studied by differential scanning calorimetry and electron backscatter diffraction", **Journal of Thermal Analysis and Calorimetry**, vol. 148, (2023) 3357–3371
6. Marzieh Ebrahimian, Mohsen Saboktakin Rizi, Sun Ig Hong, Jeoung Han Kim✉, "Effects of molybdenum on hot deformation behavior and microstructural evolution of Fe40Mn40Co10Cr10C0.5 high entropy alloys" **Science and Technology of Advanced Materials**, vol. 24, (2023) 2186119.
7. Chan Woong Park, Raj Narayan Hajra✉, Sung Hoon Kim, Se-Hwan Lee, Jeoung Han Kim✉ "Optimizing multi-interlayered additive manufacturing for high strength robust joints in Inconel 718 and Ti-6Al-4V alloys", **Journal of materials research and technology**, vol. 25 (2023) 855-872
8. Raj Narayan Hajra, Chan Woong Park, Kyunsuk Choi and Jeoung Han Kim✉, "Interlayer Tailoring of Ti-6Al-4V and 17-4PH Stainless Steel Joint by Tungsten Inert Gas Welding" **Materials**, vol. 16 (2023) 4370
9. UiJun Ko, Hamid Reza Javadinejad, Kyoung-Tae Park✉, Namhun Kwon, and Jeoung Han Kim✉ "Kinetic study of electrochemical deoxidation of commercially pure titanium in molten magnesium chloride" **Journal of Materials Science**, vol. 58 (2023) 11235–11251
10. Hyun Jong Yoo, Hyoungwon Park, Jeoung Han Kim, Changkyoo Park✉, "Effect of paint removal with kilowatt level nanosecond pulsed laser on microstructure and mechanical properties of stainless steel" **Optics and Laser Technology**, vol. 163 (2023) 109434
11. Jin Woong Park, Godwin Kwame Ahiale, Won Doo Choi, Tae-Wook Na, Seungchul Lee,

Hyun-Ju Choi, Jeoung Han Kim✉, "Effects of Nb addition on the microstructure and low-cycle fatigue properties of heat-resistant stainless steel" **Journal of Materials Research and Technology**, vol. 27 (2023) 5772-5782

12. Raj Narayan Hajra, Chinnapat Panwisawas, Jin Woong Park, Woong Choo, Byoung Jun Han, Jeoung Han Kim✉, "High-temperature phase stability and phase transformations of Niobium-Chromium Laves phase: Experimental and first-principles calculation studies" **Materials & Design**, vol. 236 (2023) 112483

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1. Andrews Nsiah Ashong, Min Young Na, Hye Jung Chang, Taesung Park, Go Ui Jun, Sang Hoon Noh✉, **Jeoung Han Kim✉** "Manganese effect on the microstructural transformation and mechanical properties of oxide dispersion strengthened steels fabricated with pre-alloyed powders", **Materials Science and Engineering A**, vol. 830, (2022) 142282.
2. Hyun Jong Yoo, Seungwoo Baek, Jeoung Han Kim, Jiyeon Choi, Yoon-Jun Kim✉, Changkyoo Park✉, "Effect of laser surface cleaning of corroded 304L stainless steel on microstructure and mechanical properties" **Journal of Materials Research and Technology**. vol. 16, (2022) 373-385.
3. Mehrdad Ghiasabadi Farahani✉ , **Jeoung Han Kim✉**, Matias Jaskari, Leo Pentti Karjalainen, Puspendu Sahu, "Newer insights into the discrimination of pole mechanisms of twinning in a face-centered cubic high-Mn steel" **Materialia** vol. 21 (2022) 101349
4. M.H. Barati Rizi, M. Ghiasabadi Farahani✉, Mahdi Aghaahmadi, **Jeoung Han Kim✉**, L.P. Karjalainen, P. Sahu, "Analysis of strain hardening behavior of a high-Mn TWIP steel using electron microscopy and cyclic stress relaxation", **Acta Materialia** vol. 240 (2022) 118309
5. Hamid Reza Javadinejad, Mokyoung Lee, Cheol Hwee Shim, Hye Jung Chang, **Jeoung Han Kim✉**, "Interfacial reaction mechanism during laser brazing of Zn–Mg–Al-coated steel to AA 6061 aluminum alloy" **Journal of Manufacturing Process** vol.83 (2022) 471-487.
6. Nana Kwabena Adomako, John J. Lewandowski, Barton Mensah Arkhurst, Haneul Choi, Hye Jung Chang, and **Jeoung Han Kim✉** "Microstructural and mechanical properties of multi-layered materials composed of Ti-6Al-4V, vanadium, and 17-4PH stainless steel produced by directed energy deposition" **Additive Manufacturing** vol.59 (2022) 103174.

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1. Nana Kwabena Adomako, Heon-Joon Park, SungChul Cha, Mokyoung Lee, **Jeoung Han Kim**[✉], "Microstructure evolution and mechanical properties of the dissimilar joint between Inconel IN718 and STS304" **Materials Science and Engineering A**, vol. 799 (2021) 140262.
2. Kyu-Sik Kim, Young-Kyun Kim, Hyeon-Jin Kim, **Jeoung Han Kim**, Kee-AhnLee[✉], "Influence of warm caliber rolling on tensile response and high cycle fatigue behavior of hypereutectoid steel", **Journal of Materials Research and Technology**, vol. 10, (2021) 205-215.
3. Nana Kwabena Adomako, Giseung Shin, Nokeun Park, Kyoungtae Park[✉], **Jeoung Han Kim**[✉], "Laser dissimilar welding of CoCrFeMnNi-high entropy alloy and duplex stainless steel" **Journal of Materials Science & Technology**, vol. 85, (2021) 95-105.
4. Andrews Nsiah Ashong, Mokyoung Lee, Sung-Tae Hong, Youn Seoung Lee[✉], **Jeoung Han Kim**[✉], "Refill Friction Stir Spot Welding of Dissimilar AA6014 Al Alloy and Carbon-Fiber-Reinforced Polymer Composite", **Metals and Materials International**, vol. 27, (2021) 95-105.
5. Giseung Shin, Yongho Park[✉], Dae Whan Kim, Ji hyun Yoon[✉], **Jeoung Han Kim**[✉] "Effect of Post-Weld Heat Treatment on Microstructure and Hardness Evolution of Functionally Gradient Materials Produced by Direct Energy Deposition", **Korean J. Met. Mater.**, vol. 59, (2021) 81-98.
6. Nana Kwabena Adomako, **Jeoung Han Kim**[✉], "Microstructure and mechanical properties of dissimilar laser lap joint of CoCrFeMnNi-high entropy alloy and duplex stainless steel" **Materials Letters** , vol. 288, (2021)129354.
7. Nana Kwabena Adomako, Sung Hoon Kim, Ji Hong Yoon, Se-Hwan Lee, and **Jeoung Han Kim**[✉], "Finite Element Modeling of Residual Stress at Joint Interface of Titanium Alloy and 17-4PH Stainless Steel" **Metals**, vol. 11, (2021) 629.
8. Barton Mensah Arkhurst, Jee Hwan Bae, Min Young Na, Hye Jung Chang, Hyun Gil Kim, Il Hyun Kim, Ho Jin Ryo, **Jeoung Han Kim**[✉] "Effect of Tellurium on the Microstructure and Mechanical Properties of Fe-14Cr Oxide-Dispersion-Strengthened Steels Produced by Additive Manufacturing" **Journal of Materials Science & Technology**, vol. 95, (2021) 114-126.
9. Andrews Nsiah Ashong, Youn Seoung Lee[✉], Kwang Soo Park, Mok-Young Lee, and **Jeoung**

- Han Kim✉**, "Effect of HF treatment on the bonding strength of laser-bonded Mg alloy/carbon fiber-reinforced plastic joint: XPS and NEXAFS study" **Applied Surface Science**, vol. 556, (2021) 149782.
10. Hamid Reza Javadinejad, Giseung Shin, Hyunseok Lee, Mi-Seon Choi✉, Jaehoon Park, Jonghun Yoon✉, and **Jeoung Han Kim✉**, "Origin of surface ridging in Ti-6Al-4V sheets produced by pack rolling and its effect on microstructural and mechanical properties" **Journal of Materials Processing Technology**, vol. 297, (2021) 117228.
 11. Tae-Sung Park, Nana Kwabena Adomako, Andrews Nsiah Ashong, Young-Kuk Kim, Seung-min Yang, and **Jeoung-han Kim✉**, "Interfacial Structure and Physical Properties of High-Entropy Oxide Coatings Prepared via Atmospheric Plasma Spraying" **Coatings**, vol. 11 (2021) 755.
 12. Chan Woong Park, Nana Kwabena Adomako, Min Gyu Lee, Jae Hyeok Kim, **Jeoung Han Kim✉** "Interfacial structure and pore formation mechanism during laser cladding of pure vanadium on Ti-6Al-4V alloy" **International Journal of Refractory Metals and Hard Materials**, vol.101 (2021) 105671.
 13. YuHyeong Jeong, Giseung Shin, Choo Woong, **J.H. Kim**, and Jonghun Yoon✉ "Dissimilar materials welding with a standoff-free vaporizing foil actuator between TRIP 1180 steel sheets and AA5052 alloy" **Materials**, vol. 14 (2021) 4969.
 14. Taesung Park, Hamid Reza Javadinejad, Young-Kuk Kim, Hye Jung Chang, Haneul Choi, Choo Woong, Andrews Nsiah Ashong, Youn Seoung Lee, **J.H. Kim✉** "Effect of processing route on the crystal structure and physical properties of bixbyite high-entropy oxides" **Journal of Alloys and Compounds**, vol. 893 (2021) 162108.

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1. M. Ghiasabadi Farahani✉, A. Zarei-Hanzaki✉, H.R. Abedi✉, **J.H. Kim✉**, M. Jaskari, P. Sahu✉, L.P. Karjalainen✉, On the activation of alternated stacking fault pair twinning mechanism in a very large-grained Fe–29Mn–2.4Al steel. **Scripta Materialia** 178 (2020) 301–306.
2. Han Sol Cho, Seong JunBae, Young SangN, Kwang Seok Lee✉, Jeoung Han Kim, Dong Geun Lee, Influence of reduction ratio on the microstructural evolution and subsequent mechanical properties of cold-drawn Co10Cr15Fe25Mn10Ni30V10 high entropy alloy wires, **Journal of Alloys and Compounds** (in-press)

3. Taesung Park, Jeoung Han Kim*, "Tensile properties and microstructure evolution during two-stage tensile testing of CoCrFeMnNi high-entropy alloy", *Journal of Materials Research and Technology*, vol. 9, (2020) 7551-7557 (IF=5.289).
4. Young-Kyun Kim, Jeoung Han Kim, Yoon-Jun Kim, David N. Seidman, Kee-Ahn Lee*, "Effect of milling temperatures on the microstructure and high temperature long-term oxidation resistance of oxide-dispersion strengthened steels", *Corrosion Science* vol. 174, (2020) 108833.
5. Giseung Shin, Yongho Park, Dae Whan Kim, Ji hyun Yoon, Jeoung Han Kim* "A study on the influence of laser power on the microstructure and mechanical properties of functionally gradient materials produced by direct energy deposition.", *Korean J. Met. Mater.*, vol. 58 (2020) pp. 1-11.
6. Chan Woong Park, Mi Seon Choi, Hyunseok Lee, Jonghun Yoon, Hamid Reza Javadinejad*, Jeoung Han Kim* "High temperature deformation behavior and microstructural evolution of as-cast and hot rolled β 21S alloy during hot deformation" *Journal of Materials Research and Technology*, vol. 9 (2020) pp. 13555-13569.
7. Won-Sang Shin, Hyun Jong Yoo, Jeoung Han Kim, Jiyeon Choi, Eun-Joon Chun, Changkyoo Park*, and Yoon-Jun Kim*, "Effect of Laser Heat-Treatment and Laser Nitriding on the Microstructural Evolutions and Wear Behaviors of AISI P21 Mold Steel" *Metals*, vol. 10 (2020) 1487.

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1. Adomako N.K., Noh S.H., Oh C.S., Yang S.S., Jeoung Han Kim[✉], Laser deposition additive manufacturing of 17-4PH stainless steel on Ti-6Al-4V using V interlayer. *Materials Research Letters*, vol. 7 (2019) 259-266 (IF=7.440).
2. Arkhurst. B.M., Jeoung Han Kim[✉], Lee M.Y., Hot metal pressing joining of carbon fiber reinforced plastic to AZ31 Mg alloy and the effect of the oxide surface layer on joint strength. *Applied Surface Science*, 477 : 241-256, 2019
3. Arkhurst B.M., Seol J.B., Lee Y.S., Lee M.Y., Jeoung Han Kim[✉], Interfacial structure and bonding mechanism of AZ31/carbon-fiber-reinforced plastic composites fabricated by thermal laser joining. *Composites Part B : Engineering*, 167 : 71-82, 2019
4. Jeoung Han Kim[✉], Na Y.S[✉]. Tensile Properties and Serrated Flow Behavior of As-Cast CoCrFeMnNi High-Entropy Alloy at Room and Elevated Temperatures. *Metals and Materials International*, 25 : 296-303, 2019
5. Hong K.H., Seol J.B., Jeoung Han Kim[✉], First principles determination of formation of Cr shell on the interface between Y-Ti-O nanoparticle and ferritic steel matrix. *Applied Surface Science*, 481 : 69-74, 2019

6. Adomako N.K., Kim J.O., Jeoung Han Kim✉, Microstructural evolution and mechanical properties of laser beam welded joints between pure V and 17-4PH stainless steel. **Materials Science and Engineering A**, 753 : 208-217, 2019
7. Andrews Nsiah Ashong, Na Min Young, Hye Jung Chang✉, Taesung Park, Hyung Chan Kim, Sang Hoon Noh, Jeoung Han Kim✉ "Influence of manganese on the microstructure and mechanical properties of oxide dispersion strengthened steels" **Materials and Design**, vol. 182 (2019) 107997 (IF=5.770).
8. Dennis Edgard Jodi, Yongsu Lee , Myeong Hyeon Jang Juhee Jung, Jonggwan Jang, Dong Woon Kim ,Jeoung Han Kim, Jong Bae Jeon, Nokeun Park✉ "Investigation of plastic strain accommodation and recrystallization behavior inCoCrNiCu x medium-entropy alloy" **Materials Letters**, vol. 253 (2019) 327-330

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1. Adomako N.K., Kim J.O., Lee S.H., Noh K.H, Jeoung Han Kim✉ Dissimilar welding between Ti–6Al–4V and 17-4PH stainless steel using a vanadium interlayer. **Mater. Sci. and Eng.** 732 : 378-397, 2018
2. Arkhurst B.M., Lee M.Y, Jeoung Han Kim✉ Effect of resin matrix on the strength of an AZ31 Mg alloy-CFRP joint made by the hot metal pressing technique. **Composite Structures**. 201 : 303-314, 2018
3. Seol J.B., Haley D., Hoelzer D.T., Jeoung Han Kim✉, Influences of interstitial and extrusion temperature on grain boundary segregation, Y–Ti–O nanofeatures, and mechanical properties of ferritic steels. **Acta Materialia**. 153 : 71-85, 2018
4. Kim S.W, Jeoung Han Kim✉. In-situ observations of deformation twins and crack propagation in a CoCrFeNiMn high-entropy alloy. **Mater. Sci. and Eng.** 718 : 321-325, 2018
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6. Jeoung Han Kim, Yang S.Y.✉, Chung D.T. Finite element study of brittle fracture by Mohr-Coulomb failure criterion. **Science of Advanced Materials**. 10 : 1315-1319, 2018
7. Adomako N.K., Jeoung Han Kim✉, Hyun Y.T. High-temperature oxidation behaviour of low-entropy alloy to medium- and high-entropy alloys. **Journal of Thermal Analysis and Calorimetry**. 133 : 13-26, 2018

8. Yang S.Y., Jeoung Han Kim✉, Kwon Y.J., Choi S.W. Diffusion pack cementation of hafnium powder with halide activator on Ni-Ti shape memory alloy. **Journal of Thermal Analysis and Calorimetry**. 133 : 5-12, 2018
9. Jeoung Han Kim, Lim K.R., Won J.W., Na Y.S. ✉, Kim H.S. Mechanical properties and deformation twinning behavior of as-cast CoCrFeMnNi high-entropy alloy at low and high temperatures. **Mater. Sci. and Eng.** 712 : 108-113, 2018
10. Arkhurst B.M., Jeoung Han Kim✉, Evolution of microstructure and mechanical properties of oxide dispersion strengthened steels made from water-atomized ferritic powder. **Metals and Materials International**. 24 : 464-480, 2018
11. Hong K.H. ✉, Jeoung Han Kim, Chang K., Kwon J.H. The role of Cr on oxide formation in Ni-Cr alloys: A theoretical study. **Computational Materials Science**. 142 : 185-191, 2018

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1. Kim Y.K., Gwon J.H., Jeoung Han Kim, Lee K.A✉. Effect of Heat Treatment on the Microstructure and Tensile Deformation Behavior of Oxide Dispersion Strengthened Alloys Manufactured by Complex Milling Process. **Archives of Metallurgy and Materials**. 62 : 1335-1340, 2017
2. Arkhurst B.M., Jeoung Han Kim✉, Park J.J., Lee C.H., Direct laser deposition of a 14Cr oxide dispersion strengthened steel powders using Y_2O_3 and HfO_2 dispersoids. **Korean J. Met. Mater.** 55 : 550-558, 2017
3. Euh K.J., Jeoung Han Kim✉, Arkhurst B.M., Kim I.H., Kim H.G. Stability of $\text{Y}-\text{Ti}-\text{O}$ nanoparticles during laser deposition of oxide dispersion strengthened steel powder. **Metals and Materials International**. 23 : 1063-1074, 2017
4. Jeoung Han Kim, KimY.W., Young S✉. Dynamic and Static Compressive Behaviors of Highly Porous Ti–Ni–Mo Shape Memory Alloy. **Science of Advanced Materials**. 9 : 1174-1176, 2017
5. Young S. Jeoung Han Kim✉, Effect of Yttrium on Microstructural Evolution and High Temperature Compressive Behavior of Ti–Ni–Hf High Temperature Shape Memory Alloys. **Science of Advanced Materials**. 9 : 1028-1031, 2017
6. Byun T.S. ✉, Jeoung Han Kim, Hoelzer D.T., Maloy S.A. A comparative assessment of the fracture toughness behavior of ferritic-martensitic steels and nanostructured ferritic alloys. **Journal of Nuclear Materials**. 484 : 157-167, 2017

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1. Seol J.B., Jeoung Han Kim✉, Choi J.M. Influence of Solid Solution Treatment on the Mechanical Properties of A286 Stainless Steels. **Science of Advanced Materials**. 8 : 2290-2294, 2016.
2. Young S., Jeoung Han Kim✉, Yeom J.T., Hong J.K. Diffusion Pack Cementation of Hf Powders on Ni–Ti Shape Memory Alloys. **Science of Advanced Materials**. 8 : 1923-1926, 2016
3. Seol J.B., Jeoung Han Kim✉ Grain Boundary Segregation and Core/Shell Structured Nanofeatures in Oxide-Dispersion Strengthened Fe-Cr Alloys. **Microsc. Microanal.** 22 : 674-675, 2016

4. Kim D.H., Jeoung Han Kim✉, Lee Y.H. Effect of second aging treatment on the microstructure and mechanical properties of SUH660 alloy. **Korean J. Met. Mater.** 54 : 716-722, 2016
5. Gwon J.H., Jeoung Han Kim, Lee K.A✉. Effect of Cryomilling on the High Temperature Creep Properties of Oxide Dispersion Strengthened Steels. **Mater. Sci. and Eng.** 676 : 209-215, 2016
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8. Jeoung Han Kim✉, Kim K.M., Yeom J.T., Young S. Effect of yttrium on martensite-austenite phase transformation temperatures and high temperature oxidation kinetics of Ti-Ni-Hf high temperature shape memory alloys. **Metals and Materials International** 22 : 204-208, 2016

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1. Jeoung Han Kim✉, Emura S., Lee Y.T. High Temperature Oxidation Behavior of Ti₂AlNb Intermetallic Alloys. **International Journal of Metallurgical & Materials Engineering.** 1 : 6 pages, 2015
2. Chang H.J., Jeoung Han Kim✉, Cho H.Y. Stability of Y-Ti-O nanoparticles during laser melting of advanced oxide dispersion-strengthened steel powder. **Journal of Alloys and Compounds.** 653 : 528-533, 2015
3. Jeoung Han Kim✉, Byun T.S., Shin E.J., Seol J.B., Young S., Reddy N. S. Small angle neutron scattering analyses and high temperature mechanical properties of nano-structured oxide dispersion-strengthened steels produced via cryomilling. **Journal of Alloys and Compounds.** 651: 363-374, 2015
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5. Euh K.J., Jeoung Han Kim✉, Shin E.J., Young S. SANS study on the microstructural evolution of nano-structured ferritic alloys with different mechanical alloying time. **Nanoscience and Nanotechnology Letters.** 7 : 754-757, 2015
6. Gwon J.H., Jeoung Han Kim, Lee K.A✉. Effects of Cryomilling on the Microstructures and High Temperature Mechanical Properties of Oxide Dispersion Strengthened Steel. **Journal of Nuclear Materials.** 459 : 205-216, 2015

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2. Jeoung Han Kim, Young S.✉, Kim Y.W., Chung D.T., Nam T.H. Shear Stress-Strain Behavior of Ni-rich and Ti-rich Shape Memory Alloys at High Strain Rates. **Science of Advanced Materials.** 6 : 2024-2026, 2014
3. Yeom J.T.✉, Jeoung Han Kim, Hong J.K., Lee J.M., Kim K.J., Kim T.O., Kim N.Y. Chang H.S. Ring-Rolling Design of Yaw Ring for Wind Turbines. **Metals and Materials International.** 20 : 521-526, 2014

4. Kim S.W. [✉], Jeoung Han Kim, Park C.H., Hong J.K., Yeom J.T. Effect of plastic working on martensitic phase transformation characteristics of TiNi alloys. **Journal of Alloys and Compounds.** 610 : 315-321, 2014
5. Yeom J.T., Jeoung Han Kim[✉], Hong J.K., Kim S.W., Park C.H., Nam T.H., Leel K.Y. Hot Forging Design of As-Cast NiTi Shape Memory Alloy. **Materials Research Bulletin.** 58 : 234-238, 2014
6. Jeoung Han Kim[✉], Park C.H., Kim S.W., Hong J.K., Oh C.S., Jeon Y.M., Kim K.M., Yeom J.T. Effect of microstructure and deformation conditions on the hot formability of Ni-Ti-Hf shape memory alloys. **Journal of Nanoscience and Nanotechnology.** 14 : 9548-9553, 2014
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9. Jeoung Han Kim[✉], Byun T.S., Lee J.H., Min J.Y., Kim S.W., Park C.H., Lee B.H. Effects of processing condition on the microstructural and tensile properties of 14Cr-based oxide dispersion strengthened alloys. **Journal of Nuclear Materials.** 449 : 300-307, 2014
10. Jeoung Han Kim[✉], Park C.H., Effect of milling temperature on nanoclusters and ultra fine grained microstructure of oxide dispersion strengthened steel. **Journal of Alloys and Compounds.** 585 : 69-74, 2014
11. Park C.H. [✉], Jeoung Han Kim, Hyun Y.T., Yeom J.T., Reddy N.S. The origins of flow softening during high-temperature deformation of a Ti-6Al-4V alloy with a lamellar microstructure. **Journal of Alloys and Compounds.** 582 : 126-129, 2014

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5. 초청강연(Invited talks)

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3. 한국항공우주연구원 타이타늄 강연 (2014)
4. 태양금속 강연 냉간단조 (2014)
5. 울산대학교, 고속인장 강연(2014)
6. 안동대학교 ODS 강연 (2013, 2015)
7. 포항산업과학기술원 타이타늄 강연 (2015)
 8. 재료연구소 3D-프린팅 강연 (2017)
 9. 한국소성가공학회 전문교육강연-변형공정지도 (2017.07.13)
 10. 대한금속재료학회 타이타늄 분과 강연- 절삭가공 (2017.08)
 11. 대한금속재료학회 타이타늄 분과 강연- 가공기술 (2018.08)
 12. 한국생산성 본부 강연 - 신소재 가공기술 및 응용 (2018.11)
 13. 대구카톨릭대 생활소비재용 타이타늄 (2022.08. 24)
 14. 대한항공 – 타이타늄 3D 프린팅 (2022.09. 01)
 15. 분말재료학회첨단구조재료분과 창립기념 워크샵 (2022.09. 07)
- 외 다수
16. 분말재료학회 전산분과 워크샵 (2023.08. 17) 외 다수

5. 국제 발표

No.	Title	Conference name
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2	J.H. Kim , T.K. Ha, Y.W. Chang, C.S. Lee : "High Temperature Deformation Behavior of Gamma TiAl Alloy- Microstructural Evolution and Mechanisms "	TMS2002 131st Annual Meeting & Exhibition, Seattle, USA, Feb 18-21. 2002
3	Jeoung Han Kim and Chong Soo Lee : "High Temperature Deformation Behavior of Gamma TiAl Alloy-Microstructural Evolution and Mechanisms"	The 4th KIM-JIM SYMPOSIUM Science University of Tokyo, Japan, March 29th, 2002
4	Jeoung Han Kim , S.L. Semiatin, and Chong Soo Lee : "High Temperature Deformation Behavior of Ti-6Al-4V Alloy with Withmanstatten microstructure"	THERMEC'2003 International Conference on Processing & Manufacturing of Advanced Materials July, 7-11, 2003, Madrid, Spain
5	Y.G. Ko, J.H. Kim , C.S. Lee, S.Y. Han, D.H. Shin and S.L. Semiatin : "High Temperature Deformation Behavior of Ultra-Fine Grained Ti-6Al-4V Alloy"	TMS2004 Annual Meeting held in Charlotte, N.C., March 14-18, 2004,
6	Jeoung Han Kim , S.L. Semiatin, and Chong Soo Lee : "Quantitative analysis on high temperature deformation behavior of Ti alloys"	The 2nd Korea-US Workshop on Advances in Metallic Structural Materials, Ramada Plaza Hotel, Jeju City, Korea, May, 11-13, 2004
7	Jeoung Han Kim , S.L. Semiatin, and Chong Soo Lee: "Deformation Behavior of Ti-6Al-4V, Ti-6.85-1.6V, and Ti-7.0Al-1.5V Alloy with a Globular Microstructure"	PRICM5 , Beijing International Convention Centre , China, Nov. 2-5, 2004
8	N.S. Reddy, Jeoung Han Kim , and Chong Soo Lee: "Quantification of Phase Volume Fraction in Alpha-beta Ti Alloys by Sensitivity Analysis of Artificial Neural Networks"	EUROMAT2005 , , Prague, Czech, Sep. 8, 2005
9	Jeoung Han Kim , Y.T. Yeom, N.K. Park, , and Chong Soo Lee "Cconsitutive analysis of the high-temperature deformation behavior of single phase α -Ti and $\alpha+\beta$ Ti-6Al-4V alloy"	Int. Conf. on Process. & Manufacturing of Advanced Materials , Canada July. 28. 2006
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11	Jeoung Han Kim , Y.T. Yeom, D.G. Lee, N.K. Park Neural Network Modeling of the Phase Volume Fraction of Ti Alloy under Nonisothermal Hot Forging Condition	EUROMAT 2007 , Germany, Oct. 2007.
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13	Jeoung Han Kim , N.Y. Kim, Y.T. Yeom, D.G. Lee, N.K. Park “Effect of Post-heat Treatment Condition on Residual Stress and Mechanical Properties in Friction Welded Alloy718 and Stainless Steel”	PRICM6 , Jeju, Korea Nov. 2007.
14	Jeoung Han Kim , Jong Taek Yeom, Jae Keun Hong, Su Gun Lim, Nho Kwang Park “Effect of Scandium on the Surface Quality of Al-Zn-Mg-(Sc) Hot Extruded Bar”	I-CAMP5 , Harbin, China Sep. 2008.
15	Jeoung Han Kim , Chae Hoon Lee, Jae Keun Hong, Jae Ho Kim, Jong Taek Yeom “Hot Forming Process Of High Strength Ti-6al-4v Bolt”	AMPT2008 , Manama, Bahrain Oct. 2008.
16	Jeoung Han Kim , Thak Sang Byun, D.T. Hoelzer “Tensile Properties Characterization of Oxide Dispersion Strengthened Ferritic Alloy Containing Nano-Size Clusters”	Materials Science & Technology 2010 Conference & Exhibition October 17-21, 2010, Houston, Texas.
17	Jeoung Han Kim , Thak Sang Byun, D.T. Hoelzer “High-Temperature Deformation Mechanism of Nanostructured Ferritic Alloy 14YWT”	American Nuclear Society: 2010 Winter Meeting and Nuclear Technology Expo November 7–11, 2010, Las Vegas, Nevada.
18	G. Vasudevanurthy, T. S. Byun, J. H. Kim , B. C. Jolly, J. D. Hunn “Mechanical Strength of Unirradiated SiC-TRISO Coatings”	American Nuclear Society: 2010 Winter Meeting and Nuclear Technology Expo November 7–11, 2010, Las Vegas, Nevada.
19	Jeoung Han Kim , Thak Sang Byun, and D.T. Hoelzer “Stress relaxation behavior of particle-strengthened ferritic alloys at high temperatures”	TMS2011 Annual Meeting held in San Diego, CA, USA, Feb. 27-March 3, 2011.
20	Jeoung Han Kim , Jong Taek Yeom, Jae Keun Hong, Thak Sang Byun, and D.T. Hoelzer	2011 International Forum on Functional Materials held in Jeju island, Korea, July 31.2011

	“MECHANICAL ALLOYING PROCESS AND MICROSTRUCTURAL OBSERVATION OF 14YWT NANOSTRUCTURED FERRITIC ALLOY	
21	Jeoung Han Kim , Thak Sang Byun, David T. Hoelzer, Seong Woong Kim, Jong Taek Yeom, and Jae Keun Hong “Microstructures and strengthening mechanisms of nanostructured ferritic alloy over wide temperature”	2nd Joint IAEA-EC Topical Meeting on Development of new structural materials for advanced fission and fusion reactor systems Location : Amphitheatre, JRC Ispra, April 17 2012
22	Jeoung Han Kim , Thak Sang Byun, Seong Woong Kim, Jong Taek Yeom, and Jae Keun Hong “Temperature effect on dissolution of Y ₂ O ₃ powder into Fe matrix during mechanical alloying of ODS steel”	IUMRS-ICA 2012 Location : Busan, Bexco, October 28 2012
23	Jeoung Han Kim , Thak Sang Byun, D.T. Hoelzer, Seong Woong Kim, Jong Taek Yeom, and Jae Keun Hong “Microstructures and strengthening mechanisms of a nanostructured ferritic alloy at wide temperatures”	American Nuclear Society Location : Chicago, Chicago, IL June 24-28, 2012•Hyatt Regency Chicago
24	Jeoung Han Kim , Thak Sang Byun, Seong Woong Kim, Jong Taek Yeom, and Chan Hee Park “Effect of cryogenic milling on the properties of Fe-14Cr ODS powder”	TMS2013 Annual Meeting held in San Antonio, TX, USA, March. 3-March 7, 2013.
25	Jeoung Han Kim , Chan Hee Park, Seong Woong Kim, Yeong Min Jeon, Chang Seok Oh, Jong Taek Yeom “The effect of chemical composition and deformation condition on the high temperature deformation of Ni-Ti-Hf shape memory alloy”	20013 International Forum on Functional Materials held in Jeju island, Korea, June 28.2013
26	Jeoung Han Kim , Chan Hee Park, Seong Woong Kim, Jong Taek Yeom, Jeon Yeong Min, T.S. Byun, Jae Hoon Lee “Effect of ball milling temperature on the ultra fine grained microstructure of oxide dispersion strengthened steel”	20013 THRMEC'2013 held in Las Vegas, USA, Dec. 2-6, 2013

	Jeoung Han Kim , Chan Hee Park, Seong Woong Kim, Jong Taek Yeom, T.S. Byun “Cryomilling Effect on the Microstructural and Physical Properties of Oxide Dispersion Strengthened Steel”	20013 ATPC International Forum held in Jeju island, Korea, Sep. 29-Oct. 3, 2013
27	Jeoung Han Kim , Chan Hee Park, Seong Woong Kim, Jong Taek Yeom, T.S. Byun “Cryomilling Effect on the Microstructural and Physical Properties of Oxide Dispersion Strengthened Steel”	TMS2014 Annual Meeting held in San Diego, CA, USA, Feb. 16-20, 2014.
28	Jeoung Han Kim , Chan Hee Park, Seong Woong Kim, Jong Taek Yeom, T.S. Byun “Cryomilling Effect on the Microstructural and Physical Properties of Oxide Dispersion Strengthened Steel”	ICNST2014 held in Mokpo National University, Korea, Nov. 5-7, 2014.
29	Jeoung Han Kim , Chan Hee Park, Seong Woong Kim, Jong Taek Yeom, T.S. Byun “Cryomilling Effect on the Microstructural and Physical Properties of Oxide Dispersion Strengthened Steel”	(Keynote speech)International Conference on Emerging trends in Mechanical Engineering - 2018, Andhra Pradesh, India during December 20 - 22, 2018
30	Jeoung Han Kim “Thermal Joining of Carbon Fiber Reinforced Plastic to Metal Sheet”	10th International Conference on Materials for Advanced Technologies, Singapore, 2019
31	Jeoung-Han Kim , Nana Kwabena Adomako, Sanghoon Noh, Chang-Seok Oh, Sangsun Yang “Laser Deposition Additive Manufacturing of 17-4PH Stainless Steel on Ti-6Al-4V”	The 17th International Symposium on Novel and Nano Materials(ISNNM), Jeju. 2020
32	Taesung Park, Yeong-Guk Kim, Jeoung Han Kim ^{1*} “Interfacial structure and physical properties of High-entropy oxide coating prepared by atmospheric plasma spraying”	

6. 저서

- ‘적층제조 금속소재와 시장동향’(사) 대한금속·재료학회, 2023년 04월
집필진 참여

7. Patents

- 특허 등록

발명자	특허 출원명	특허 등록번호	등록시기
염종택, 박노광, 김정한, 이동근, 허욱	링 압연공정의 형상 설계방법	769253	2007.10.16
염종택, 박노광, 김정한, 현용택	타이타늄합금 볼트용 단조장치 및 이를 이용한 타이타늄 합금볼트용 단조품 제조방법 및 타이타늄 합금 볼트의 제조방법	10-1065357	2011.09.08
홍재근, 박노광, 염종택, 김정한	금속분말의 유동도 및 걸보기 밀도 측정장비 및 이를 이용한 측정방법	10-1009927	2011.01.14
허욱, 장희상, 이진모, 김남용, 염종택, 박노광, 김정한,	링형 가공품의 열처리 방법	10-1137490	2012.04.10
김정한, 염종택, 박찬희, 김성웅, 홍재근	니켈 과잉 타이타늄-니켈-하프늄계 형상기억합금의 및 이의 열간 성형 방법	10-2013- 0102921	2013.08.29
김정한, 홍성현, 김성웅, 홍재근, 염종택	이트륨산화물이 분산된 원자력용 분산강화합금 및 이의 제조방법	10-2013- 0102682	2013.09.23
김정한	Ni-Ti 계 형상 기억 와이어	10-2015- 0120701	2017.03.22
김정한	고강도 석출경화 합금의 열처리 방법	10-1851864	2018.04.18
김정한, 박진용, 노경호, 이은수	레이저를 이용한 금속 접합방법 및 그 방법을 이용하여 생성된 부속품을 포함하는 고속발사체	10-1981625	2019.05.17
김정한	Fe 계 산화물 분산 강화 합금의 제조방법	10-2107239	2020.04.27
김정한	고온금속 압축법을 이용한 금속과 플라스틱의 접합방법	10-2109127	2020.05.04
김정한, 박진용, 노경호, 이승진	접합용 이종금속 및 접합용 합금을 이용하는 이종금속의 접합방법	10-2130770	2020.06.30
이세환, 활동기, 강춘길, 김정한	이종 금속 접합용 조성물 및 이의 제조방법	10-2196007	2020.12.22
김정한, 홍윤상, 배소영, 김해근, 박지현	블루투스 안전 삼각대를 가지는 이동체	10-2243441	2021.04.16

외 다수

- 프로그램 등록

발명자	프로그램 명	프로그램 등록번호	등록시기
염종택, 김정한, 박노광	KIMM-Ni 결정립 해석 모듈	2005-01-121-003973	2005. 07. 19
염종택, 김정한, 박노광	KIMM-Ni 탄소성 해석 모듈	2005-01-121-003974	2005. 07. 19
염종택, 김정한, 박노광	KIMM-Ni 점소성 해석 모듈	2005-01-121-003975	2005. 07. 19
염종택, 김정한, 박노광	KIMM-Ni 재결정 연계해석모듈	2007-01-121-000726	2007. 02. 07
염종택, 김정한, 박노광	KIMM-크리프/피로 비선형 수명해석 모듈	2007-01-121-000725	2007. 02. 07
염종택, 김정한, 박노광	KIMM-크리프/피로 선형 수명해석 모듈	2007-01-121-000724	2007. 02. 07
김정한, 염종택, 박노광	KIMM-Ti 합금 비등온성형시 상분율 및 결정립도 해석모듈	2007-01-121-001203	2007.03.08
김정한, 염종택, 박노광	KIMM-Ti 합금 항온성형시 상분율 해석모듈	2007-01-121-001204	2007.03.08

8. Awards and Honors

- 한국과학기술단체 총연합회 '제33회 과학기술우수논문상', 2023년 7월 6일
- 한국분말재료학회 아스플로 신진상, 2022년 11월
- 한국분말야금학회 논문상, 2020년 11월
- 대한금속재료학회 논문상 제2부문-Bronze, 2020년 7월 16일
- 한국소성가공학회 신진기술상, 2019년 10월 17일
- 한국소성가공학회 학술대회 진합학술상, 2018년 7월 3일
- 대한금속재료학회, 재료조직사진상 가작 수상, 2017년 4월 27일
- 한밭대학교 우수교수상 (연구부분), Best Research Award (2016-2024년, 7회 수상)
- 대한금속재료학회, 굿리뷰어상 수상, 2016년 1월15일
- 대한금속재료학회, 신진기술상 수상, 2014년 4월24일
- 원천소재 기술인력교류사업 연구자 선정, 2009년 12월 07일
- 재료연구소, 근무공로상, 2008년 12월 30일
- 대한금속재료학회, 포스터발표 논문 우수상, 2006년 4월28일
- Marquis Who's Who in the world 2016-2018.
- International Biographical Centre, 2000 Outstanding Intellectuals of the 21st Century
10th edition
- 8회 소재부품안전 및 신뢰성 심포지엄 우수 논문발표상 (2017)

12. ICMAT2019 Best Poster Award (2019)

9. Conference activity

1. Advisory Board member of ICAMSME 2020 (<http://icamsme.nbkrist.org/>).
2. Advisory Board member of ICOMAT 2022
3. ISNNM-2022 publication committee
4. The 14th Asian Workshop on Micro/Nano Forming Technology (AWMFT2023) and The 4th Asian Pacific Symposium on Technology of Plasticity (APSTP2023) committee