

Kisub Cho

Professor

Artificial Intelligence-Aided Material Design Laboratory

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EDUCATION

Kookmin University, Seoul, Korea

(2007-2012) Ph.D., Materials Science & Engineering

(2005-2007) M.S., Materials Science & Engineering

(1998-2005) M.S., Materials Science & Engineering

EXPERIENCE

Massachusetts Institute of Technology (MIT), Cambridge, MA, USA

(2012-2014) Postdoctoral Research Fellow, Department of Materials Science & Engineering

Kookmin University, Seoul, Korea

(2012-2016) Senior Researcher, Center of Advanced Materials Technology

(2016-2021) Assistant Professor, School of Materials Science & Engineering

(2021-present) Associate Professor, School of Materials Science & Engineering

RESEARCH AREAS

Materials design and discovery using machine learning

Synthesis and consolidation of W-based amorphous alloys

Development of optimization algorithms for inverse design of structural materials

Alloy and process design of ultrahigh strength secondary hardening alloy steels using artificial neural network

Alloy and process design of ultrahigh strength aluminum alloy for future mobility using artificial neural network

ACADEMIC ACTIVITIES

Editorial Board, Korean Society for Heat Treatment
Director of Technology, Materials Research Society of Korea
Committee, Division of Computational Science/Artificial Intelligence, Korean Powder Metallurgy & Materials Institute
Committee, Division of Artificial Intelligence, Korean Institute of Metals and Materials

Publications (selected)

Article

Kwon, Y. J., et al. (2023). Thermodynamic evaluation of the phase stability in mechanically alloyed AlCu_xNiCoTi high-entropy alloys. *Journal of Alloys and Compounds*, 948, 169772.

Lee, K., et al. (2023). Genetic design of new aluminum alloys to overcome strength-ductility trade-off dilemma. *Journal of Alloys and Compounds*, 947, 169546.

Won, Y. J., et al. (2023). Role of W addition in reducing heat checking and enhancing the mechanical properties of hot work tool steel. *Journal of Materials Research and Technology*, 24, 3413-3422.

Lee, K., et al. (2022). Effect of interfacial bridging atoms on the strength of Al/CNT composites: Machine-learning-based prediction and experimental validation. *Journal of Materials Research and Technology*, 17, 1770-1776.

Cho, K., & Schuh, C. A. (2015). W-based amorphous phase stable to high temperatures. *Acta Materialia*, 85, 331-342.

Hassani-Gangaraj, S. M., et al. (2015). Experimental assessment and simulation of surface nanocrystallization by severe shot peening. *Acta Materialia*, 97, 105-115.

Patent (registered)

A Secondary Hardening Martensitic Alloy and its Manufacturing Method (2022)

An Ultra-High Strength High Co-Ni Secondary Hardening Martensitic Steel and its Manufacturing Method (2022)

Tool steel for Nb-Included Steel Cutting Knives and its Manufacturing Method (2021)

Structural High-Strength Steel (2016)

Tool Steel for Steel Cutting Knives (2012)

A High-Strength and High-Toughness Alloy Steel Containing W and its Manufacturing Method (2012)

Manufacturing Method of Shield Knuckle for Anti-roll Bar in High-Speed Railway Vehicles (2012)

Forming Method of Shield Knuckle for Anti-roll Bar in High-Speed Railway Vehicles (2012)

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