RESEARCH ACTIVITIES and ACHIEVEMENTS
Assistant Prof. Dr. Soya Nishimoto
as of 31st March, 2025

Journal Paper Publications

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11. Improving fracture toughness of rapidly solidified Mg–Zn–Y alloys by controlling precipitation of cluster-arranged nanoplates and LPSO phases, S. Nishimoto, M. Yamasaki, Y. Kawamura, Journal of Alloys and Compounds, 1014 (2025) Art. No. 178720.
https://doi.org/10.1016/j.jallcom.2025.178720, Issued on 5 February 2025.

--- 2024 ----------

10. Dynamic recovery around deformation kink boundary of Mg-Y-Zn alloy with long-period stacking ordered structure, M. Yamasaki, T. Matsumoto, T. Mayama, H. Somekawa, K. Hagihara, S. Nishimoto, Y. Kawamura, Materials Letters, 377 (2024) Art. No. 137360.
https://doi.org/10.1016/j.matlet.2024.137360, Issued on 15 December 2024.

9. Effects of heterogeneous microstructure evolution on the tensile and fracture toughness properties of extruded AZ31B alloys, S. X. Tang, S. Nishimoto, K. Hagihara, M. Yamasaki, Journal of Magnesium and Alloys, 12 (2024) 4126-4139.
https://doi.org/10.1016/j.jma.2024.10.005, Issued on October 2024.

8. Effects of multimodal microstructure on fracture toughness and its anisotropy of LPSO-type extruded Mg-1Zn-2Y alloys, S. Nishimoto, T. Yasuda, K. Hagihara, M. Yamasaki, Journal of Magnesium and Alloys, 12 (2024) 2952 - 2966.
https://doi.org/10.1016/j.jma.2024.07.018, Issued on July 2024.

7. Contributions of multimodal microstructure in the deformation behavior of extruded Mg alloys containing LPSO phase, K. Hagihara, T. Mayama, M. Yamasaki, S. Harjo, T. Tokunaga, K. Yamamoto, M. Sugita, K. Aoyama, W. Gong, S. Nishimoto, International Journal of Plasticity, 173 (2024) Art. No. 103865.
https://doi.org/10.1016/j.ijplas.2023.103865, Issued on February 2024.

--- 2023 ----------

6. The microstructure and anisotropic deformation behavior of rapidly solidified ribbon consolidated Mg-Zn-X (X = Y, Gd, Nd) alloys, D. Drozdenko, K. Fekete, P. Dobroň, G. Németh, J. Veselý, S. Nishimoto, M. Yamasaki, Y. Kawamura Journal of Alloys and Compounds, 944 (2023) Art. No. 169175.
https://doi.org/ 10.1016/j.jallcom.2023.169175, Issued on 25 May 2023.

5. Relationship between Cluster-Arranged Nanoplate Formation and Mechanical Properties of Dilute Mg-Y-Zn Alloys Prepared by Combination of Low-Cooling-Rate Solidification and Extrusion Techniques, S. Ishizaki, M. Yamasaki, K. Hagihara, S. Nishimoto, T. Nakamura, Y. Kawamura, Materials Transactions, 64, (2023) 756-765.
https://doi.org/10.2320/matertrans.MT-MD2022015, April 2023.

--- 2022 ----------

4. Inherited multimodal microstructure evolution of high-fracture-toughness Mg-Zn-Y-Al alloys during extrusion for the consolidation of rapidly solidified ribbons, S. Nishimoto, M. Yamasaki, Y. Kawamura, Journal of Magnesium and Alloys, 10 (2023) 2433-2445.

https://doi.org/10.1016/j.jma.2022.05.014, Issued on September 2022.

3. Effect of hierarchical multimodal microstructure evolution on tensile properties and fracture toughness of rapidly solidified Mg–Zn–Y–Al alloys with LPSO phase, S. Nishimoto, Y. Koguchi, M. Yamasaki, Y. Kawamura, Materials Science and Engineering: 832 (2022) Art. No. 142348.
https://doi.org/10.1016/j.msea.2021.142348, Issued on 14 January 2022.

2. The Effects of Pre-Consolidation Heat Treatment on the Tensile and Fracture Toughness Behavior of the Rapidly Solidified Mg-Zn-Y-Al Alloys, S. Nishimoto, M. Yamasaki, Y. Kawamura, Materials Transactions, 63 (2022) 1396-1405.
https://doi.org/10.2320/matertrans.MT-L2022008, Issued on October 2022.

--- 2019 ----------

1. High-strain-rate superplasticity and tensile behavior of fine-grained Mg97Zn1Y2 alloys fabricated by chip/ribbon-consolidation, K. Suzawa, S. Inoue, S. Nishimoto, S. Fuchigami, M. Yamasaki, Y. Kawamura, K. Yoshida, N. Kawabe, Materials Science and Engineering A, 7649 (2019) Art. No. 138179.
https://doi.org/10.1016/j.msea.2019.138179, Issued on September 2019.

Journal Paper Publications (和文誌)

1. Cu–Ni–Al 合金圧延材の組織と機械的特性に及ぼす時効、仕上圧延および最終焼鈍の影響, 沖 世紀, 西本宗矢, 山崎倫昭, 兵藤 宏, 依藤 洋, 銅と銅合金, 63 (2024) 20-25.
https://doi.org/10.34562/jic.63.1_20, Issued on 1 August 2024.

Proceedings Paper Publications

1. Investigation of Microstructural Factors Affecting the Plane-Strain Fracture Toughness of Mg–Zn–Y–Al Alloys Processed by Consolidation of Rapidly Solidified Ribbons, S. Nishimoto, M. Yamasaki, S. Inoue, Y. Kawamura, Proceedings of the 12th International Conference on Magnesium Alloys and their Applications (Mg 2021), 2021, pp. 71-77.
https://doi.org/10.1007/978-3-030-72432-0_8, Issued on 15 June 2021.