

Division: Hydrogen Storage

Year: 2016

No.	Description
25	Ikoma, Y., Kumano, K., Edalati, K., Saito, K., Guo, Q. and Horita, Z. (2017) Phase transformation of germanium by processing through high-pressure torsion: strain and temperature effects, <i>Philosophical Magazine Letters</i> , 97 (1), 27-34. DOI: 10.1080/09500839.2016.1266099
24	Takizawa, Y., Kajita, T., Kral, P., Masuda, T., Watanabe, K., Yumoto, M., Otagiri, Y., Sklenicka, V. and Horita, Z. (2017) Superplasticity of Inconel 718 after processing by high-pressure sliding (HPS), <i>Materials Science and Engineering A</i> , 682, 603-612. DOI: 10.1016/j.msea.2016.11.081
23	Mito, M., Matsui, H., Tsuruta, K., Yamaguchi, T., Nakamura, K., Deguchi, H., Shirakawa, N., Adachi, H., Yamasaki, T., Iwaoka, H., Ikoma, Y. and Horita, Z. (2016) Large enhancement of superconducting transition temperature in single-element superconducting rhenium by shear strain, <i>Scientific Reports</i> , 6, 36337. DOI: 10.1038/srep36337
22	Ito, Y., Edalati, K. and Horita, Z. (2017) High-pressure torsion of aluminum with ultrahigh purity (99.9999%) and occurrence of inverse Hall-Petch relationship, <i>Materials Science and Engineering: A</i> , 679, 428-434. DOI: 10.1016/j.msea.2016.10.066
21	Isik, M., Niinomi, M., Liu, H., Cho, K., Nakai, M., Horita, Z., Narushima, T. and Ueda, K. (2016) Optimization of microstructure and mechanical properties of Co-Cr-Mo alloys by high-pressure torsion and subsequent short annealing, <i>Materials Transactions</i> , 57 (11), 1887-1896. DOI: 10.2320/matertrans.M2016112
20	Lin, H.-J., Li, H.-W., Paik, B., Wang, J. and Akiba, E. (2016) Improvement of hydrogen storage property of three-component Mg(NH ₂) ₂ -LiNH ₂ -LiH composites by additives, <i>Dalton Transactions</i> , 45 (39), 15374-15381. DOI: 10.1039/c6dt02845d
19	Razavi-Khosroshahi, H., Edalati, K., Arita, M., Horita, Z. and Fuji, M. (2016) Plastic strain and grain size effect on high-pressure phase transformations in nanostructured TiO ₂ ceramics, <i>Scripta Materialia</i> , 124, 59-62. DOI: 10.1016/j.scriptamat.2016.06.022
18	Edalati, K., Matsuo, M., Emami, H., Itano, S., Alhamidi, A., Staykov, A., Smith, D.J., Orimo, S.-I., Akiba, E. and Horita, Z. (2016) Impact of severe plastic deformation on microstructure and hydrogen storage of titanium-iron-manganese intermetallics, <i>Scripta Materialia</i> , 124, 108-111. DOI: 10.1016/j.scriptamat.2016.07.007
17	Masuda, T., Takizawa, Y., Yumoto, M., Otagiri, Y. and Horita, Z. (2016) Extra strengthening and superplasticity of ultrafine-grained A2024 alloy produced by high-pressure sliding, <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 80 (9), 593-601. DOI: 10.2320/jinstmet.J2016012Document
16	Razavi-Khosroshahi, H., Edalati, K., Hirayama, M., Emami, H., Arita, M., Yamauchi, M., Hagiwara, H., Ida, S., Ishihara, T., Akiba, E., Horita, Z. and Fuji, M. (2016) Visible-Light-Driven Photocatalytic Hydrogen Generation on Nanosized TiO ₂ -II Stabilized by High-Pressure Torsion, <i>ACS Catalysis</i> , 6 (8), 5103-5107. DOI: 10.1021/acscatal.6b01482
15	Takizawa, Y., Masuda, T., Fujimitsu, K., Kajita, T., Watanabe, K., Yumoto, M., Otagiri, Y. and Horita, Z. (2016) Scaling up of High-Pressure Sliding (HPS) for Grain Refinement and Superplasticity,

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	Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 47, 4669-4681. DOI: 10.1007/s11661-016-3623-3
14	Picasso, C.V., Safin, D.A., Dovgaliuk, I., Devred, F., Debecker, D., Li, H.-W., Proost, J. and Filinchuk, Y. (2016) Reduction of CO ₂ with KBH ₄ in solvent-free conditions, International Journal of Hydrogen Energy, 41 (32), 14377-14386. DOI: 10.1016/j.ijhydene.2016.04.052
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12	Mohamed, I.F., Lee, S., Edalati, K., Horita, Z., Abdullah, S., Omar, M.Z. and Wan Zamri, W.F.H. (2016) Grain refinement and microstructure evolution in aluminum A2618 alloy by high-pressure torsion, Jurnal Teknologi, 78 (6-9), 149-152. DOI: 10.11113/jt.v78.9163
11	Yuan, H., Tsai, M.-H., Sha, G., Liu, F., Horita, Z., Zhu, Y. and Wang, J.T. (2016) Atomic-scale homogenization in an fcc-based high-entropy alloy via severe plastic deformation, Journal of Alloys and Compounds, 686, 15-23. DOI: 10.1016/j.jallcom.2016.05.337
10	Mine, Y., Haraguchi, D., Ideguchi, T., Horita, N., Horita, Z. and Takashima, K. (2016) Hydrogen embrittlement of ultrafine-grained austenitic stainless steels processed by high-pressure torsion at moderate temperature, ISIJ International, 56 (6), 1083-1090. DOI: 10.2355/isijinternational.ISIJINT-2015-664
9	Edalati, K., Shao, H., Emami, H., Iwaoka, H., Akiba, E. and Horita, Z. (2016) Activation of titanium-vanadium alloy for hydrogen storage by introduction of nanograins and edge dislocations using high-pressure torsion, International Journal of Hydrogen Energy, 41 (21), 8917-8924. DOI: 10.1016/j.ijhydene.2016.03.146
8	Valiev, R.Z., Estrin, Y., Horita, Z., Langdon, T.G., Zehetbauer, M.J. and Zhu, Y. (2016) Producing Bulk Ultrafine-Grained Materials by Severe Plastic Deformation: Ten Years Later, JOM, 68 (4), 1216-1226. DOI: 10.1007/s11837-016-1820-6
7	Iwaoka, H., Arita, M. and Horita, Z. (2016) Hydrogen diffusion in ultrafine-grained palladium: Roles of dislocations and grain boundaries, Acta Materialia, 107, 168-177. DOI: 10.1016/j.actamat.2016.01.069
6	Emami, H., Edalati, K., Staykov, A., Hongo, T., Iwaoka, H., Horita, Z. and Akiba, E. (2016) Solid-state reactions and hydrogen storage in magnesium mixed with various elements by high-pressure torsion: Experiments and first-principles calculations, RSC Advances, 6 (14), 11665-11674. DOI: 10.1039/c5ra23728a
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4	Edalati, K., Lee, D.J., Nagaoka, T., Arita, M., Kim, H.S., Horita, Z. and Pippan, R. (2016) Real hydrostatic pressure in high-pressure torsion measured by bismuth phase transformations and

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3	Edalati, K., Emami, H., Ikeda, Y., Iwaoka, H., Tanaka, I., Akiba, E. and Horita, Z. (2016) New nanostructured phases with reversible hydrogen storage capability in immiscible magnesium-zirconium system produced by high-pressure torsion, <i>Acta Materialia</i> , 108, 293-303. DOI: 10.1016/j.actamat.2016.02.026
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1	Zhang, F., Yonemoto, R., Arita, M. and Horita, Z. (2016) Hydrogen generation from pure water using Al-Sn powders consolidated through high-pressure torsion, <i>Journal of Materials Research</i> , 31 (6), 775-782. DOI: 10.1557/jmr.2016.74