

## 2009 年度業績 一田中 敏宏

### 学術論文・解説記事

1. S. Kawanishi, T. Yoshikawa and T. Tanaka, Equilibrium Phase Relationship between SiC and a Liquid Phase in the Fe-Si-C System at 1523 - 1723 K, *Materials Transaction*, Vol.50, No.4, 806-813. 2009
2. T. Yoshikawa, S. Kawanishi and T. Tanaka, Fundamental study for solvent growth of silicon carbide utilizing Fe-Si melt, *Journal of Physics: Conference Series*, Vol.165, p.012022, 2009
3. T. Tanaka, T. Yoshikawa, N. Hirai and S. Katsuyama, Hydrothermal metallurgy for recycling of slag and glass, *Journal of Physics: Conference Series*, Vol.165, p.012077, 2009
4. M. Suzuki and T. Tanaka, Prediction of phase separation in multi-component oxide glass for the fabrication of porous glass materials from waste slag, *Journal of Physics: Conference Series*, Vol.165, p.012078, 2009
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8. J. Lee, J. Lee, T. Tanaka and H. Mori, In situ atomic-scale observation of melting point suppression in nanometer-sized gold particles, *Nanotechnology*, Vol. 20, 475706, 2009
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10. T. Takeuchi, K. Sawai, Y. Tsuboi, M. Shiota, S. Ishimoto, N. Hirai and S. Osumi, The partial state-of-charge cycle performance of lead-acid batteries, *Journal of Power Sources*, Vol. 189, 1190-1198, 2009
11. 田中敏宏, 吉川健, 平井信充, 水熱反応を利用したスラグの利材化の試み, *ふえらむ*, Vol. 14, No.6, 353-359. 2009
12. T. Yoshikawa, K. Morita, S. Kawanishi and T. Tanaka, Thermodynamics of Impurity Elements in Solid Silicon, *Journal of Alloys and Compounds*, Vol.490, 31-41, 2010
13. Masashi Nakamoto, Erkki Heikinheimo, Marko Kekkonen, Michael Friman, Lauri Holappa, Melting behavior of Sn-Bi alloy powder compacts observed using optical dilatometry, *International Journal of Materials Research*, 677-683, 2009

14. Masashi Nakamoto, Matti Liukkonen, Michael Friman, Erkki Heikinheimo, Marko Hämäläinen, Lauri Holappa and Takaiku Yamamoto, Novel multiphase equilibrium method using an Na<sub>2</sub>O–SiO<sub>2</sub> Droplet, Scripta Materialia, 62, 871-874, 2010
15. S.Katsuyama and T.Kobayashi, Effect of mechanical milling on thermoelectric properties of half-Heusler ZrNiSn<sub>0.98</sub>Sb<sub>0.02</sub> intermetallic compound, Materials Science and Engineering B, 166, 99-103, 2010

#### 国際会議プロシーディングス

1. S.-J. Tae, T. Adachi, T. Tanaka and K. Morita, Estimation of Environmental Credit for Recycling Blast Furnace Slag with a Hydrothermal Reaction on LCA, Proceedings of Asia Steel 2009, S10-07. 2009
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3. T. Tanaka, M. Ohmachi and M. Ueda, Effective Usage of Solid CaO to Refining in Steelmaking, Proceedings of Asia Steel 2009, S3-40. 2009
4. T. Tanaka, Evaluation of dynamic wettability of liquid Zn with steel sheets containing Si and Mn, Proc. of The Asia-Pacific Galvanizing Conference 2009, A-31. 2009
5. Masashi Nakamoto, Shingo Tagaki, Takaiku Yamamoto and Toshihiro Tanaka, Sustainable Valuable Metals and Steels by Two Immiscible Liquid Phases, ISISD2010, 144-146, 2010

#### 受賞

1. 村上 俊平, 優秀発表賞(材料化学研究会・鉄鋼プロセス研究会), 2009.11.30
2. 吉永 将大, 優秀発表賞(材料化学研究会・鉄鋼プロセス研究会), 2009.11.30
3. 中本将嗣, 日本鉄鋼協会 研究奨励賞, 2010年3月
4. 中本将嗣, 日本金属学会 第19回奨励賞 材料化学部門, 2009年9月

#### 特許権などの知的財産権

1. 銅鉄スクラップからの白金族元素の効率的回収法, 発明者: 中本将嗣、山本高郁, 権利者: 住友金属工業株式会社, 特願 2010-011022, 出願年月日: 2010年1月21日
2. 鉄スクラップに共存する元素の分離・回収方法, 発明者: 小野英樹、山本高郁、中本将嗣、確井建夫、山口勝弘, 権利者: 住友金属工業株式会社, 特願 2009-152515, 出願年月日: 2009年6月26日

#### 新聞報道（関連報道）など

1. 山本高郁, 日刊産業新聞, 鉄スクラップでシンポ, 2010年1月26日
2. 山本高郁, 日刊産業新聞, 阪大共同研究講座シンポ, 2009年12月16日