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Short Vita of Dr. Tetsuya Nagasaka

Date of birth: 9 October, 1957 (56 years old) male
Place of birth: Osaka Prefecture, Japan
Nationality: Japan

Education:

Mar. 1980 Graduated from Department of Metallurgy, Faculty of Engineering, Tohoku University, Sendai, Japan

Mar. 1982 Completed Master course, Department of Metallurgy, Faculty of Engineering, Tohoku University, Sendai, Japan

Mar. 1985 Completed Ph.D course, Department of Metallurgy, Faculty of Engineering, Tohoku University, Sendai, Japan

Title of Ph.D thesis: Reduction Kinetics of Liquid Iron Oxide with Reducing Gases

Carrier:

Apr. 1985 Joined Tohoku University as a Research Associate of Metallurgy, Faculty of Engineering (Ferrous Process Metallurgy Division)

Apr. 1992 Stayed in Carnegie Mellon University, Pittsburgh, PA, USA as a Research Associate of Materials Science & Engineering Department (Profs. R.J. Fruehan and A.W. Cramb)

Feb. 1994 Appointed as an Associate Professor of Ferrous Process Metallurgy, Department of Metallurgy, Faculty of Engineering, Tohoku University

Apr. 1994 Moved to Graduate School of Engineering, Tohoku University

Mar. 2002 Promoted as a Professor of Eco-materials Processing, Department of Metallurgy, Graduate School of Engineering, Tohoku University

Apr. 2003 Moved to Graduate School of Environmental Science, Tohoku University

Apr. 2010 Special Assistant to President, Tohoku University

Apr. 2011 Moved to Dept. of Metallurgy, Graduate School of Engineering, Tohoku University

Oct. 2011 Assoc. member of Science Council of Japan

Mar. 2012 Department Head of Metallurgy
Board member (The Iron and Steel Institute of Japan, The Japan Institute of Metals, The Institute of Life Cycle Assessment, Japan)

June 2012 Assistant to Dean, School of Engineering, Tohoku University

Honor and Award:

Jul. 1986 Silver Medal for young researcher, Materials Research Foundation, Japan

May 1988 Honda Memorial Silver Medal, Honda Memorial Foundation, Japan

May 1994 Murakami Memorial Silver Medal, Murakami Memorial Foundation, Japan

Nov. 1995 Tawara Best Paper Award, The Iron and Steel Institute of Japan

Nov. 1995 Yamaoka Award, The Iron and Steel Institute of Japan

Apr. 1996 Yamaoka Award, The Iron and Steel Institute of Japan

Apr. 1998 Nishiyama Memorial Award, The Iron and Steel Institute of Japan

Mar. 2001 Contribution Award, The Japan Institute for Metals

Mar. 2003 Sawamura Best Paper Award, The Iron and Steel Institute of Japan

Oct. 2003 Best Paper Award, The Japan Institute for Metals
Nov. 2006 The Best Poster Presentation Award, The 7th International Conference on EcoBalance
Mar. 2009 Sawamura Best Paper Award, The Iron and Steel Institute of Japan
Mar. 2011 Meritorious Prize of Scientific Achievement, The Iron and Steel Institute of Japan
May 2011 Best Paper Award, Env. Div., AISTech, USA
Mar. 2014 Tanigawa Harris Award, Japan Inst. Metals, Japan

List of recent major publications

1) S. Itoh, S. Sato, J. Ono, H. Okada and T. Nagasaka: Feasibility Study of New Rutile Extraction Process from Natural Ilmenite Ore Based on Oxidation Reaction, Metallurgical and Materials Transactions B, Vol.37B (2006), No.6, pp. 979-985.

2) K. Nakano, S. Miyabe, T. Ozaki, Y. Wada, K. Nakajima and T. Nagasaka: Substance Flow Analysis on Diffused Toxics Contained in End-of-Life Cellular Phone, Journal of the Japan Institute for Metals, Vol.71 (2007), No.9, pp. 801-808.

3) S. Nakamura, K. Nakajima, Y. Kondo and T. Nagasaka: Waste Input-Output Approach to Material Flow Analysis: Concepts and Application to Base Metals, Journal of Industrial Ecology, Vol.11 (2007), No.4, pp.50-63.

4) S. Nakamura, S. Murakami, K. Nakajima and T. Nagasaka: A hybrid input-output approach to metal production and its application to the introduction of lead-free solders, Environmental Science and Technology, Vol.42 (2008), No.10, pp.3843-3848.

5) S. Itoh, A. Tsubone, K. Matsubae-Yokoyama, K. Nakajima and T. Nagasaka: New EAF Dust Treatment Process with the Aid of Strong Magnetic Field, ISIJ International, Vol.48 (2008), No.10, pp.1339-1344.

6) Y.-S. Jeong, H. Kubo, K. Matsubae-Yokoyama, J.-J. Pak and T. Nagasaka: Substance Flow Analysis of Phosphorus and Manganese Correlated with Korean Steel Industry, Resource Conservation and Recycling, Vol.53 (2009), No.9, pp. 479-489.

7) K. Matsubae-Yokoyama, H. Kubo, K. Nakajima and T. Nagasaka: A Material Flow Analysis of Phosphorus in Japan - The Iron and Steel Industry as a Major Source, Journal of Industrial Ecology, Vol.13 (2009), No.5, pp.687-705.

8) S. Kashiwakura, Y. Takahashi, H. Maekawa and T. Nagasaka: Application of ^{11}B MAS-NMR to the characterization of boron in coal fly ash generated from Nantun coal, Fuel, Vol.89 (2010), No.5, pp. 1006-1011.

9) K. Nakajima, O. Takeda, T. Miki, K. Matsubae, S. Nakamura and T. Nagasaka: Thermodynamic Analysis on the Contamination by Alloying Element in Aluminum Recycling, Environmental Science and Technology, Vol.44 (2010), No.14 , pp. 5594–5600. [10.1021/es9038769]

10) T. Takahashi, S. Kashiwakura, K. Kanehashi, S. Hayashi, T. Nagasaka: Analysis of Atomic Scale Chemical Environments of Boron in Coal by ^{11}B Solid State NMR, Environmental Science & Technology, Vol.45 (2011), No.3, pp.890–895. [10.1021/es102312d]

11) Hwong-wen Ma, Kazuyo Matsubae, Kenichi Nakajima, Min-Shing Tsai, Kung-Hsien Shao, Pi-Cheng Chen, Chia-Ho Lee and Tetsuya Nagasaka: Domestic Substance Flow of Zinc and Present Status of EAF Dust

Management for Zinc Recovery in Taiwan, Resource Conservation and Recycling, Vol.56 (2011), No.1, pp.134-140. [10.1016/j.resconrec.2011.08.005]

12) X. Lu, T. Hiraki, K. Nakajima, O. Takeda, K. Matsuabe, H.-M. Zhu, S. Nakamura and T. Nagasaka: Thermodynamic Analysis of Separation of Alloying Elements in Recycling of End-of-Life Titanium Products, Separation and Purification Technology, 89 (2012), pp.135–141 [doi: 10.1016/j.seppur.2012.01.008]

13) Akira Tsubone, Tsuyoshi Momiyama, Masanori Inoue, Romchat Chairaksa, Kazuyo Matsubae and Tetsuya Nagasaka: Dust Injection Technology for Reducing Dust Treatment Burden, Iron&Steel Technology , Vol.9 (2012), No.7, pp.184-194.

14) T. Hiraki, K. Kobayashi, S. Urushibata, K. Matsubae and T. Nagasaka: Removal of Sulfur from CaF_2 Containing Desulfurization Slag Exhausted from Secondary Steelmaking Process by Oxidation, Metallurgical and Materials Transactions B, Vol.43B (2012), No.4, pp.703-709 [doi: 10.1007/s11663-012-9685-8]

15) Shinichiro Nakamura, Yasushi Kondo, Kazuyo Matsubae, Kenichi Nakajima, Tomohiro Tasaki, and Tetsuya Nagasaka: Quality and dilution losses of the recycling of ferrous materials embedded in passenger cars: input-output analysis under explicit consideration of scrap quality, Environmental Science & Technology, Vol.46 (2012), No.17 (September), pp.9266–9273. [doi: 10.1021/es3013529]

16) K. Kobayashi, T. Hiraki and T. Nagasaka: Oxidation of Pure Solid CaS with Ar-O_2 Gas Mixture, High Temperature Materials and Processes, Vol.31 (2012), pp.667-673 [doi: 10.1515/htmp-2012-0104]

17) K. Nakajima, H. Ohno, Y. Kondo, K. Matsubae, O. Takeda, T. Miki, S. Nakamura and T. Nagasaka: Simultaneous material flow analysis of nickel, chromium and molybdenum used in alloy steel by means of input-output analysis, Environmental Science & Technology, 47(9), 4653-4660, 2013.

18) E. Yamasue, K. Matsubae, K. Nakajima, S. Hashimoto and T. Nagasaka: Recyclability of Phosphorous from Steelmaking Slag in Terms of Total Materials Requirement, Journal of Industrial Ecology, Vol.17 (2013), No.5, pp.722-730. [doi: 10.1111/jiec.12047]

19) Y. Tobu, M. Nakano, T. Nakagawa and T. Nagasaka: Effect of Granule Structure on the Combustion Behavior of Coke Breeze for Iron Ore Sintering, ISIJ International, Vol.53 (2013), No.9, pp.1594-1598. [doi: 10.2355/isijinternational.53.1594]

20) Elizabeth Webeck, Kazuyo Matsubae, Kenichi Nakajima, Keisuke Nansai, Tetsuya Nagasaka: Analysis of Phosphorus Dependency in Asia, Sociotechnica, Vol.11 (2014), pp.119-126.

21) Hajime Ohno, Kazuyo Matsubae, Kenichi Nakajima, Shinichiro Nakamura and Tetsuya Nagasaka: Unintentional Flow of Alloying Elements in Steel during Recycling of End-of-Life Vehicles, Journal of Industrial Ecology, Vol.18 (2014), No.2, pp. 242–253. [doi: 10.1111/jiec.12095]

22) Kinichi Nakajima, Keisuke Nansai, Kazuyo Matsubae and Tetsuya Nagasaka: Material Flow of Iron in Global Supply Chain, Tetsu-to-Hagane, Vol.100 (2014), No.6, pp.750-755.

23) Kazuyo Matsubae, Yosuke Iizuka, Hajime Ohno, Takehito Hiraki, Takahiro Miki, Kinichi Nakajima and Tetsuya Nagasaka: Distribution Analysis on Steel Alloying Elements in the End of Life Vehicle Scrap Recycling Process, Tetsu-to-Hagane, Vol.100 (2014), No.6, pp.788-793.

24) Kazuyo Matsubae, Yousuke Iizuka, Hiroki Osamura, Hajime Ohno, Kenichi Nakajima and Tetsuya Nagasaka：Cost Benefit Analysis of End of Life Vehicle Origin Scrap Sorting, Tetsu-to-Hagane, Vol.100 (2014), No.6, pp.794-798.

25) Shinichiro Nakamura, Yasushi Kondo, Kazuyo Matsubae, Kenichi Nakajima, Shigemi Kagawa, and Tetsuya Nagasaka: MaTrace: Tracing the fate of materials over time and across products in open-loop recycling, Environmental Science & Technology, Vol.48 (2014), No.13, pp.7207-7214. [doi: 10.1021/es500820h]

26) Takehito Hiraki, Takahiro Miki, Kenichi Nakajima, Kazuyo Matsubae, Shinichiro Nakamura and Tetsuya Nagasaka: Thermodynamic Analysis for the Refining Ability of Salt Flux for Aluminum Recycling, Materials, Vol.7 (2014), pp.5543-5553. [doi: 10.3390/ma7085543]

27) E. Webeck, K. Matsubae, T. Nagasaka: Phosphorus requirements for the changing diets of China, India and Japan, Environmental Economics and Policy Studies, in press [doi: 10.1007/s10018-014-0088-8]

28) T. Hiraki and T. Nagasaka: An Easier Upgrading Process of Aluminum Dross Residue by Screening Technique, Journal of Material Cycles and Waste Management, Vol.16 (2014), in press [doi: 10.1007/s10163-014-0283-5]

29) Shigemi Kagawa, Shinichiro Nakamura, Yasushi Kondo, Kazuyo Matsubae and Tetsuya Nagasaka: Forecasting Replacement Demand of Durable Goods and the Induced Secondary Material Flows: A Case Study of Automobiles, Journal of Industrial Ecology, Vol.18 (2014), in press

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