



Personal Information

First Name: Kaveh

Last Name: Edalati

Place and Date of Birth: Tehran, Iran, 1975/6/27.

Nationality: Iran

Gender and Marital Status: Male and Single

Languages: Persian (excellent), English (good), Turkish (fair) and Japanese (weak)

Contact Information

Business Address: 744 Motooka, Nishi-ku, Fukuoka-shi, 819-0395, Fukuoka, Japan.

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Education

- [1] PhD in Materials Physics and Chemistry, Kyushu University, 744 Motooka, Nishi-ku, Fukuoka-shi, 819-0395, Fukuoka, Japan, 2007/10/1-2010/9/27.
PhD Thesis: Investigation on Microstructure and Mechanical Property Evolution of Pure Metals during High-Pressure Torsion and Correlations with Physical Parameters, Supervisor: Prof. Zenji Horita.
- [2] MSc in Materials Engineering – Identification & Selection of Metallic Materials, Tehran University, Faculty of Engineering, Central Campus, 16th of Azar Street, Enghelab Avenue, Tehran, Iran, 1999/9/23-2002/10/3.
MSc Thesis: Replacing FeSi by SiC in Gray Cast Iron Melting, Supervisor: Prof. Farshad Akhlaghi.
- [3] Bachelor of Science in Materials Engineering – Casting, Sahand University of Technology, New Sahand Town, Tabriz, Iran, 1994/1/29-1998/9/22.
- [4] High School Diploma in Mathematics-Physics, Shahid Beheshti High School, Khoramshahr Square, Bojnourd, Iran, 1989/9/23-1993/6/21.
- [5] Junior High School, 22 Bahman School, Felestin Street, Shirvan, Iran, 1986/9/23-1989/6/21.
- [6] Elementary School, Bahonar School, Sarab, Iran, 1981/9/23-1986/6/21.

Certifications

- [1] Level 2 in Liquid Penetrant Testing Accordance with ISO 9712, 2006.
- [2] Level 2 in Magnetic Particle Testing Accordance with ISO 9712, 2006.
- [3] Level 1 & 2 in Ultrasonic Testing Accordance with ISO 9712, 2003.
- [4] Level 1 & 2 in Radiography Testing Accordance with ISO 9712, 2003.

Employment History

- [1] Radiation Protection Technological Center of Iran, Department of Non-destructive Testing (NDT) and Inspection, as Researcher and NDT Expert, Tehran, Iran, 2003/9/21-2007/9/18.
- [2] Kankash Parto Technical Inspection Company, as Research and Training Managers, 2005/5/23-2007/9/18.
- [3] Kharg Petrochemical Company, Department of Technical Inspection, as Inspector, Kharg Island, Iran, 2005/1/30-2005/5/22.

International Journal Papers

- [1] **K. Edalati** and Z. Horita, “Correlations between hardness and atomic bond parameters of pure metals and semi-metals after processing by high-pressure torsion”, *Scripta Materialia*, in press, 2010.
- [2] **K. Edalati**, H. Iwaoka, Z. Horita, H. Fujiwara, K. Ameyama, M. Tanaka and K. Higashida, “Fabrication of ultrafine-grained Ti- (5-50 wt.%) Al₂O₃ composites using high-pressure torsion”, *Kovove Materialy - Metallic Materials*, in press, 2010.
- [3] **K. Edalati**, Z. Horita, H. Fujiwara and K. Ameyama, “Cold consolidation of ball-milled titanium powders using high-pressure torsion”, *Metallurgical and Materials Transactions A*, in press, 2010.
- [4] **K. Edalati** and Z. Horita, “Continues high-pressure torsion”, *Journal of Materials Science*, Vol. 45, No. 17, pp. 4578-4582, 2010.
- [5] S. W. Lee, **K. Edalati** and Z. Horita, “Microstructures and mechanical properties of pure V and Mo processed by



Kaveh Edalati's CV and Publications

Postdoctoral Fellow at Kyushu University, Faculty of Engineering
Department of Materials Science and Engineering, JAPAN

- high-pressure torsion”, *Materials Transactions*, Vol. 51, No. 6, pp. 1072-1079, 2010.
- [6] **K. Edalati**, Z. Horita, H. Fujiwara, K. Ameyama, M. Tanaka and K. Higashida, “High strength and ductility in ball-milled titanium powders consolidated by high-pressure torsion”, *Materials Science Forum*, Vol. 654-656, No. 1, pp. 1239-1242, 2010.
- [7] **K. Edalati** and Z. Horita, “Application of high-pressure torsion for consolidation of ceramic powders”, *Scripta Materialia*, Vol. 63, No. 2, pp. 174-177, 2010.
- [8] **K. Edalati** and Z. Horita, “Universal plot for hardness variation in pure metals processed by high-pressure torsion”, *Materials Transactions*, Vol. 51, No. 5, pp. 1051-1054, 2010.
- [9] **K. Edalati**, Z. Horita and Y. Mine, “High-pressure torsion of hafnium”, *Materials Science and Engineering A*, Vol. 527, No. 7-8, pp. 2136-2141, 2010.
- [10] **K. Edalati**, Y. Yokoyama and Z. Horita, “High-pressure torsion of machining chips and bulk discs of amorphous $Zr_{50}Cu_{30}Al_{10}Ni_{10}$ ”, *Materials Transactions*, Vol. 51, No. 1, pp. 23-26, 2010.
- [11] **K. Edalati**, Z. Horita, M. Tanaka and K. Higashida, “High pressure torsion of pure Ti: effect of pressure and strain on allotropy”, *Advanced Materials Research*, Vol. 89-91, pp. 171-176, 2010.
- [12] **K. Edalati**, Y. Ito, K. Suehiro and Z. Horita, “Softening of high purity aluminum and copper processed by high pressure torsion”, *International Journal of Materials Research*, Vol. 100, No. 12, pp. 1668-1673, 2009.
- [13] **K. Edalati**, Z. Horita, S. Yagi and E. Matsubara, “Allotropic phase transformation of pure zirconium by high-pressure torsion”, *Materials Science and Engineering A*, Vol. 523, No. 1-2, pp. 277-281, 2009.
- [14] **K. Edalati**, E. Matsubara and Z. Horita, “Processing pure Ti by high-pressure torsion in wide ranges of pressures and strain”, *Metallurgical and Materials Transactions A*, Vol. 40, No. 9, pp. 2079-2086, 2009.
- [15] Y. Harai, **K. Edalati**, Z. Horita and T. G. Langdon, “Using ring samples to evaluate the processing characteristics in high-pressure torsion”, *Acta Materialia*, Vol. 57, No. 4, pp. 1147-1153, 2009.
- [16] **K. Edalati** and Z. Horita, “Scaling-up of high pressure torsion using ring shape”, *Materials Transactions*, Vol. 50, No. 1, pp. 92-95, 2009.
- [17] **K. Edalati**, T. Fujioka and Z. Horita, “Evolution of mechanical properties and microstructures with equivalent strain in pure Fe processed by high pressure torsion”, *Materials Transactions*, Vol. 50, No. 1, pp. 44-50, 2009.
- [18] **K. Edalati**, Z. Horita and T. G. Langdon, “The significance of slippage in processing by high-pressure torsion”, *Scripta Materialia*, Vol. 60, No. 1, pp. 9-12, 2009.
- [19] **K. Edalati**, T. Fujioka and Z. Horita, “Microstructure and mechanical properties of pure Cu processed by high-pressure torsion”, *Materials Science and Engineering A*, Vol. 497, No. 1-2, pp. 168-173, 2008.
- [20] Y. Ito, Y. Harai, T. Fujioka, **K. Edalati** and Z. Horita, “Use of ring sample for high-pressure torsion and microstructural evolution with equivalent strain”, *Materials Science Forum*, Vol. 584-586, No. 1, pp. 191-196, 2008.
- [21] B. Rokrok, **K. Edalati**, E. Yahaghi, N. Mohammadzadeh, N. Rastkhah and A. Movafeghi, “Three-dimensional mapping of non-complex specimens by image processing and optical density evaluation of digitised radiographs”, *Insight Journal of The British Institute of Non-Destructive Testing*, Vol. 51, No. 6, pp. 315-320, 2009.
- [22] **K. Edalati**, A. Edalati and A. Kermani, “Thickness gauging of thin plates by multi Peak frequency decomposition of lamb wave signals”, *Journal of Testing and Evaluation*, Vol. 36, No. 3, pp. 1-9, 2008.
- [23] **K. Edalati**, B. Rokrok, A. Kermani, M. Seiedi, A. Movafeghi and M. Shahandeh, “Scattering and image contrast simulation for double wall radiography of pipes”, *International Journal of Pressure Vessels and Piping*, Vol. 84, No. 7, pp. 441-450, 2007.
- [24] **K. Edalati**, A. Kermani, M. Seiedi, M. Movafeghi, “Defect detection in thin plates by ultrasonic Lamb wave techniques”, *International Journal of Materials and Product Technology*, Vol. 27, No. 3-4, pp. 156-172, 2006.
- [25] **K. Edalati**, F. Akhlaghi and A. Edalati, “Influence of SiC and FeSi as silicon carriers on the characteristics of gray cast iron”, *Transactions of Indian Institute of Metals*, Vol. 59, No. 1, pp. 65-72, 2006.
- [26] **K. Edalati**, N. Rastkhah, A. Kermani, M. Seiedi and A. Movafeghi, “The use of radiography for thickness measurement and corrosion monitoring in pipes”, *International Journal of Pressure Vessels and Piping*, Vol. 83, No. 7, pp. 736-741, 2006.
- [27] **K. Edalati**, B. Rokrok, A. Kermani, M. Seiedi, A. Movafeghi, and N. Rastkhah, “Sensitivity evaluation in double wall radiography of pipes and multilayer plates by assessment the Monte Carlo simulation”, *Journal of Testing and Evaluation*, Vol. 34, No. 6, pp. 1-8, 2006.
- [28] A. Movafeghi, M. H. Kargarnovin, H. Soltanian-Zadeh, M. Taheri, G. Ghasemi, B. Rokrok, **K. Edalati** and N. Rastkhah, “Flaw detection improvement of digitized radiographs by morphological transformations”, *Insight Journal of The British Institute of Non-Destructive Testing*, Vol. 47, No. 10, pp. 625-631, 2005.
- [29] **K. Edalati**, F. Akhlaghi and M. Nili-Ahmadabadi, “Influence of SiC and FeSi addition on the characteristics of gray cast iron melts poured at different temperatures”, *Journal of Materials Processing Technology*, Vol. 160, No. 3, pp. 183-187, 2005.



- [30] A. Movafeghi, M. Kargarnovin, H. Soltanianzadeh, **K. Edalati**, B. Rokrok, A. Kermani and M. Seiedi, “[A radiographic calibration method for eddy current testing of heat exchanger tubes](#)”, *Insight Journal of The British Institute of Non-Destructive Testing*, Vol. 46, No. 10, pp. 594-597, 2004.
- [31] **K. Edalati**, N. Rastkhah, A. Kermani, M. Seiedi and A. Movafeghi, “[In-service corrosion evaluation in pipelines using gamma radiography - a numerical approach](#)”, *Insight Journal of The British Institute of Non-Destructive Testing*, Vol. 46, No. 7, pp. 396-398, 2004.
- [32] **K. Edalati**, F. Akhlaghi and M. Nili-Ahmadabadi, “[Influence of inoculant and/or SiC addition on characteristics of grey cast iron](#)”, *International Journal of Cast Metals Research*, Vol. 17, No. 3, pp. 147-151, 2004.

Recent International Conference papers (Underlined person was speaker)

- [1] **K. Edalati** and Z. Horita, “[Processing aluminum and aluminum alloys by continuous high-pressure torsion](#)”, *The 12th International Conference on Aluminum Alloys*, The Japan Institute of Light Metals, Yokohama, Japan, September 5-9, 2010.
- [2] **K. Edalati**, Z. Horita, H. Fujiwara, K. Ameyama, M. Tanaka and K. Higashida, “[High strength and ductility in ball-milled titanium powders consolidated by high-pressure torsion](#)”, *The 7th Pacific Rim International Conference on Advanced Materials and Processing (PRICM)*, Cairns Convention Centre, Cairns, Australia, 1-6 August, 2010.
- [3] **K. Edalati** and Z. Horita, “[Continuous high-pressure torsion](#)”, *The 6th International Symposium on Ultrafine-Grained Materials, TMS Annual Meeting and Exhibition*, Seattle, WA, USA, February 14-18, 2010.
- [4] **K. Edalati** and Z. Horita, “[High pressure torsion of pure metals for universal plot](#)”, *The 6th International Symposium on Ultrafine-Grained Materials, TMS Annual Meeting and Exhibition*, Seattle, WA, USA, February 14-18, 2010.
- [5] **K. Edalati** and Z. Horita, “[Processing pure iron under different modes of severe plastic deformation](#)”, *The 2nd International Symposium on Steel Science (ISSS)*, The Iron and Steel Institute of Japan, Kyoto, Japan, October 21-24, 2009.
- [6] **K. Edalati**, Z. Horita, M. Tanaka and K. Higashida, “[High pressure torsion of pure Ti: effect of pressure and strain on allotropy](#)”, *International Conference on Processing and Manufacturing of Advanced Materials, Processing, Fabrication, Properties and Applications (THERMEC)*, Martim Hotel, Berlin, Germany, August 25-29, 2009.
- [7] R. Tejedor, **K. Edalati**, J. A. Benito, J. M. Cabrera and Z. Horita, “[Role of impurities in steels processed by high pressure torsion](#)”, *The 2nd International Symposium on Bulk Nanostructured Materials from Fundamentals to Innovations (BNM)*, Ufa, Russia, September 22-26, 2009.
- [8] **K. Edalati**, Y. Ito, K. Suehiro and Z. Horita, “[Softening behavior of Al and Cu during or after HPT](#)”, *International Symposium on Giant Straining Process for Advanced Materials (GSAM)*, Nishijin Plaza, Fukuoka, Japan, November 21-24, 2008.
- [9] Y. Ito, Y. Harai, T. Fujioka, **K. Edalati** and Z. Horita, “[Use of ring sample for high-pressure torsion and microstructural evolution with equivalent strain](#)”, *The 4th International Conference on Nanomaterials by Severe Plastic Deformation (NanoSPD4)*, Goslar, Germany, August 18-22, 2008.

Recent Domestic Conference papers (Underlined person was speaker)

- [1] **K. Edalati**, S. Toh, Z. Horita, T. Furuta and S. Kuramoto, “[Nanocrystalline Fe-Ni-Co-Ti alloys produced by HPT](#)”, *ISIJ-JIM Annual Fall Meeting*, Hokkaido University, Hokkaido, Japan, September 25-27, 2010.
- [2] **K. Edalati** and Z. Horita, “[Compaction of ceramic powders by high-pressure torsion](#)”, *ISIJ-JIM Annual Kyushu Local Meeting*, Kumamoto University, Kumamoto, Japan, June 5, 2010.
- [3] S. Kuramoto, K. Mabuchi, T. Furuta, **K. Edalati** and Z. Horita, “[Nanocrystallization in HPT-processed Fe-Ni-Co-Ti alloy](#)”, *ISIJ-JIM Annual Spring Meeting*, Tsukuba University, Ibaraki, Japan, March 28-30, 2010.
- [4] S. W. Lee, **K. Edalati** and Z. Horita, “[Microstructure and mechanical properties of pure Cr and Nb processed by high-pressure torsion](#)”, *ISIJ-JIM Annual Spring Meeting*, Tsukuba University, Ibaraki, Japan, March 28-30, 2010.
- [5] **K. Edalati** and Z. Horita, “[Strain-induced hydride formation in hafnium by application of high-pressure torsion](#)”, *ISIJ-JIM Annual Spring Meeting*, Tsukuba University, Ibaraki, Japan, March 28-30, 2010.
- [6] S. W. Lee, **K. Edalati** and Z. Horita, “[Microstructures and mechanical properties of pure V and Mo processed by high pressure torsion](#)”, *JIM Annual Fall Meeting*, Kyoto University, Japan, September 15-17, 2009.
- [7] **K. Edalati**, Z. Horita, H. Fujiwara and K. Ameyama, “[Consolidation of ball-milled Ti powder by application of HPT](#)”, *JIM Annual Fall Meeting*, Kyoto University, Japan, September 15-17, 2009.
- [8] S. W. Lee, **K. Edalati** and Z. Horita, “[Microstructure and mechanical properties of pure V and Mo processed by high pressure torsion](#)”, *ISIJ-JIM Annual Kyushu Local Meeting*, Kyushu Institute of Technology, Tobata Campus, Kitakyushu, Japan, June 6, 2009.
- [9] **K. Edalati** and Z. Horita, “[HPT processing of pure metals](#)”, *ISIJ-JIM Annual Kyushu Local Meeting*, Kyushu Institute



Kaveh Edalati's CV and Publications
Postdoctoral Fellow at Kyushu University, Faculty of Engineering
Department of Materials Science and Engineering, JAPAN

- of Technology, Tobata Campus, Kitakyushu, Japan, June 6, 2009.
- [10] **K. Edalati**, Z. Horita, S. Yagi and E. Matsubara, “[Application of high pressure torsion to high purity zirconium](#)”, *ISIJ-JIM Annual Spring Meeting*, Tokyo Institute of Technology, Tokyo, Japan, March 28-30, 2009.
 - [11] **K. Edalati**, Z. Horita and E. Matsubara, “[Microstructure and mechanical properties of HPT-processed Ti](#)”, *JILM Annual Meeting*, Kougakuin University, Tokyo, Japan, November 14-15, 2008.
 - [12] **K. Edalati**, T. Fujioka and Z. Horita, “[The effect of strain and pressure on the mechanical properties of HPT-processed Cu and Fe using disc and ring specimens](#)”, *ISIJ-JIM Annual Fall Meeting*, Kumamoto University, Japan, September 23-25, 2008.
 - [13] **K. Edalati**, T. Fujioka and Z. Horita, “[Evolution of microstructure and mechanical properties of Cu and Fe through application of high-pressure torsion](#)”, *ISIJ-JIM Annual Kyushu Local Meeting*, Kyushu University, Chikushi Campus, Kyushu University, Fukuoka, Japan, June 7, 2008.
 - [14] **K. Edalati**, T. Fujioka and Z. Horita, “[Application of HPT to Cu and Fe using disc and ring specimens](#)”, *ISIJ-JIM Annual Spring Meeting*, Musashi Institute of Technology, Tokyo, Japan, March 26-28, 2008.

Membership

- [1] A Member of the Minerals, Metals & Materials Society (TMS).
- [2] A Member of Japan Institute of Light Metals (JILM).
- [3] A Member of Japan Institute of Metals (JIM).
- [4] A Member of Iranian Society for Trace Elements Research.

Awards

- [1] Award Winner for Presentation during the Young Scientist Session in Sixth International Symposium on Ultrafine Grained Materials, TMS Annual Meeting and Exhibition in Seattle, WA, USA, 2010.
- [2] Scholarship for Attending THERMEC International Conference in Berlin, Germany from Kyushu University, 2009.
- [3] Award for the Excellent Student Paper in GSAM International Conference in Fukuoka, Japan, 2008.
- [4] Scholarship for PhD Study from Islamic Development Bank (IDB), 2007.