

Manuel E. Brito, Eng. D. *Curriculum Vitae*

Affiliation and Official Address:

National Institute of Advanced Industrial Science and Technology (AIST)

Energy Technology Research Institute,
AIST Central 5, 1-1-1 Higashi, Tsukuba

Ibaraki 305-8565 Japan.

Tel: +81-29-861-4293;

Fax: +81-29-861-4540;

Email: manuel-brito@aist.go.jp



Personal Information

- ✧ Family Names: Brito Salazar
- ✧ Given Names: Manuel Eduardo
- ✧ Marital Status: Married (Three children) ; Sex: Male
- ✧ Nationality: Venezuelan
- ✧ D.O.B.: March 1, 1959; P.O.B.: Caracas, Venezuela

Education:

- ✧ Ph.D.: Materials Science, Nagaoka University of Technology –Japan-, 1989
- ✧ M.S. : Materials Science, Nagaoka University of Technology-Japan-, 1986
- ✧ B. S. : Materials Engineering, Universidad Simon Bolivar –Venezuela-, 1982

Professional Career:

- ✧ Senior Research Scientist, National Institute of Advanced Industrial Science and Technology, AIST (*a change upon organization rearrangement*) 2000~present.
- ✧ Senior Research Scientist, National Industrial Research Institute of Nagoya (NIRIN), Agency of Industrial Science and Technology, 1992~2000.
- ✧ Post-doctoral researcher, National Institute for Inorganic Materials (NIRIM),

Science and Technology Agency, 1900-1992.

- ◇ Assistant Professor, Nagaoka University of Technology, 1989-1990

Research Interests:

- ◇ Main Field: Dissimilar Materials Interface and Grain Boundary Engineering
- ◇ Other Fields: Microstructural Analysis (TEM, STEM, EDS, EELS)
- ◇ Current interests:
 1. *In situ* analysis (XPS, SPM, Raman, etc) applied to SOFC technology
 2. Solid State Diffusion Phenomena (SEM/EBDS, SEM/EDS, SIMS)
 3. Interfacial Structure and Interfacial Reactions between dissimilar materials

Honors:

- ◇ Standing Trustee, Materials Research Society- Japan, 2009~ present
- ◇ Administrative Advisory Board, Nagaoka University of Technology –Japan-, 2004-2007
- ◇ Visiting Professor, Nagaoka University of Technology, 2002~ present
- ◇ STA Fellowship, Science and Technology Agency –Japan-, 1990-1992
- ◇ Graduate Studies Scholarship, Ministry of Education (*MONBUSHO*), Japan (1982-1989)

Professional Societies:

- ◇ Materials Research Society-Japan, member, Standing Trustee
- ◇ Material Research Society (USA), member
- ◇ The SOFC Society of Japan, member
- ◇ The Electrochemical Society (USA), member
- ◇ Microscopy Society of America (USA), member
- ◇ International Society of Electrochemistry, member

Professional Activities:

- ◇ Journal Editor: “*Advanced in Technology of Materials and Materials Processing Journal* (Australia)”
- ◇ Journal Editorial Board: “*Transactions of the Materials Research Society of Japan*”, “*Science and Technology of Advanced Materials – STAM(Japan)*” and

“Progress in Natural Science: Materials International(China)”

- ✧ International Conferences Organizing Committee: exceeding 30
- ✧ Learned Societies Committees: multiple.
- ✧ Reviewer: Journal of Power Sources, Journal of the Electrochemical Society, Solid State Ionics, Acta Materialia, etc...

Publications:

- ✧ Proceedings books edited: 4 volumes
- ✧ Papers in refereed journals: in excess of 180
- ✧ Communications to scientific meetings: in excess of 290
- ✧ Patents: 11 Japanese patents; 5 US patents; 1 US patent pending
- ✧ Invited Essays: 3 (in Japanese)

5 Most Cited Publications (as retrieved from SCOPUS Oct. 10, 2011)

Hirao, Kiyoshi, Ohashi, Masayoshi, **Brito, Manuel E.**, Kanzaki, Shuzo, “Processing strategy for producing highly anisotropic silicon nitride”, (1995) Journal of the American Ceramic Society, 78 (6), pp. 1687-1690. **Cited 192 times.**

Becher, P.F., Sun, E.Y., Plucknett, K.P., Alexander, K.B., Hsueh, C.-H., Lin, H.-T., Waters, S.B., Westmoreland, C.G., Kang, E.-S., Hirao, K., **Brito, M.E.**, “Microstructural design of silicon nitride with improved fracture toughness: I, Effects of grain shape and size” (1998) Journal of the American Ceramic Society, 81 (11), pp. 2821-2830. **Cited 183 times.**

Hirao, Kiyoshi, Nagaoka, Takaaki, **Brito, Manuel E.**, Kanzaki, Shuzo, “Microstructure control of silicon nitride by seeding with rodlike β -silicon nitride particles” (1994) Journal of the American Ceramic Society, 77 (7), pp. 1857-1862. **Cited 175 times.**

Sun, E.Y., Becher, P.F., Plucknett, K.P., Hsueh, C.-H., Alexander, K.B., Waters, S.B., Hirao, K., **Brito, M.E.**, “Microstructural design of silicon nitride with improved fracture toughness: II, Effects of yttria and alumina additives” (1998) Journal of the American Ceramic Society, 81 (11), pp. 2831-2840. **Cited 118 times.**

Hirao, K., Watari, K., **Brito, M.E.**, Toriyama, M., Kanzaki, S., “High thermal conductivity in silicon nitride with anisotropic microstructure” (1996) Journal of the American Ceramic Society, 79 (9), pp. 2485-2488. **Cited 87 times.**

5 Most Recent Publications (as retrieved from SCOPUS Oct. 10, 2011)

Izuki, M., **Brito, M.E.**, Yamaji, K., Kishimoto, H., Cho, D.-H., Shimonosono, T., Horita, T., Yokokawa, H. “Interfacial stability and cation diffusion across the LSCF/GDC interface” (2011) Journal of Power Sources, 196 (17), pp. 7232-7236.

Yokokawa, H., Yamaji, K., **Brito, M.E.**, Kishimoto, H., Horita, T., “General considerations on degradation of Solid Oxide Fuel Cell anodes and cathodes due to impurities in gases” (2011) Journal of Power Sources, 196 (17), pp. 7070-7075.

Yoshinaga, M., Kishimoto, H., **Brito, M.E.**, Yamaji, K., Horita, T., Yokokawa, H., “Carbon deposition map for nickel particles onto oxide substrates analyzed by micro-Raman spectroscopy”, (2011) Nippon Seramikkusu Kyokai Gakujutsu Ronbunshi/Journal of the Ceramic Society of Japan, 119 (1388), pp. 307-309.

Yoshinaga, M., Kishimoto, H., Yamaji, K., Xiong, Y.-P., **Brito, M.E.**, Horita, T., Yokokawa, H., “Deposited carbon distributions on nickel film/oxide substrate systems” (2011) Solid State Ionics, 192 (1), pp. 571-575.

Xiong, Y.-P., Kishimoto, H., Yamaji, K., Yoshinaga, M., Horita, T., **Brito, M.E.**, Yokokawa, H., “Electronic conductivity of pure ceria” (2011) Solid State Ionics, 192 (1), pp. 476-479.