

原著論文

List of Papers: 1983 -2008(0225)

- 1) Y. Kodera, N. Yamasaki, T. Yamamoto, T. Kawasaki, M. Ohyanagi, Z. A. Munir, “Hydrogen storage Mg₂Ni alloy produced by induction field activated combustion synthesis”, *Journal of Alloys and Compounds*, Vol. 446-447, 138-141(2007)
- 2) T. Kondo, M. Yasuhara, Y. Kodera, M. Ohyanagi, Z. A. Munir, “Effect of Pulsed DC Current on Atomic Diffusion of Mo-C Diffusion Couple”, *Material Science & Technology 2007 Conference and Exhibition, Detroit, Innovative Processing and Synthesis of Ceramics, Glasses and Composites*, 209-215 (2007).
- 3) M. Shibuya and M. Ohyanagi, “Effect of Nickel Boride Additive on Simultaneous Densification and Phase Decomposition of TiB₂-WB₂ Solid Solutions by Pressureless Sintering using Induction Heating”, *J. Euro. Ceram. Soc.*, vol.27, 301-306 (2007)
- 4) M. Shibuya, Y. Yamamoto and M. Ohyanagi, “ Simultaneous Densification and Phase Decomposition of TiB₂-WB₂ Solid Solutions Activated by Cobalt Boride Additive”, *J. Euro. Ceram. Soc.*, vol.27, 307-312 (2007)
- 5) T. Yamamoto, N. Ishibashi, N. Toyofuku, Y. Kodera, M. Ohyanagi, Z. A. Munir, “ Consolidation of h-BN with Disorder-Order Transformation“ , *Innovative Processing and Synthesis of Ceramics, Glasses and Composites, Materials Science and Technology, (MS&T) 2006: PROCESSING*, 531-538 (2006)
- 6) N. Toyofuku, Y. Kodera, M. Ohyanagi, Z. A. Munir, Effects of Heating Rate and Applied Pressure on Sintering of SiC Nanopowder with Stacking Disordered Structure”, *Materials Science and Technology (MS&T) 2006: FUNDAMENTALS AND CHARACTERIZATION: Volume 1*, 509-516 (2006)
- 7) U. Anselmi-Tamburini, Y. Kodera, M. Gasch, C. Unuvar, Z. A. Munir, M. Ohyanagi and S. M. Johnson, “Synthesis and characterization of dense ultra-high temperature thermal protection materials produced by field activation through spark plasma sintering (SPS): I. Hafnium Diboride”, *J. Mater. Sci.*, Vol.41, No.10, 3097 – 3104 (2006)
- 8) Z.A. Munir, U. Anselmi-Tamburini and M. Ohyanagi, “The effect of electric field and pressure on the synthesis and consolidation of materials: A review of the spark plasma sintering method”, *J. Mater. Sci.*, Vol.41, No.3, 763 - 777 (2006)
- 9) K. Shirai, T. Yamamoto, M. Ohyanagi, Z.A. Munir, “Effect of AlN addition on the consolidation of SiC with stacking- disordered structure”, *J. Ceram. Soc. Jpn.*, Vol.114, No.2, 220-223 (2006).
- 10) Y. Kodera, T. Yamamoto, N. Toyofuku, M. Ohyanagi, Z. Munir, “Role of disorder-order transformation in consolidation of ceramics”, *J. Mater. Sci.*, Vol. 41, No.3, 727-732 (2006).
- 11) K. Shirai, T. Yamamoto, M. Ohyanagi, Z.A. Munir, “Accelerated Sintering of SiC nanopowder with stacking- disordered transformation”, *Proceedings of MRS fall meeting 2005*, Vol.903E, Z14 30.1-30.6(2006).
- 12) Y. Kodera, I. Naoaki, T. Imai, T. Yamamoto, M. Ohyanagi, U. Anselmi-Tamburini, Z. A. Munir, “Spark Plasma Sintering of Less-crystallized Boron Carbide with Defects”, *Proceedings of 6th*

Pacific RIM meeting 2005, Ceramic Transaction, "Pulse Electric Current Synthesis and Processing of Materials", Vol.194, 101-111 (2006)

- 13) Y. Kodera, N. Toyofuku, T. Yamamoto, M. Ohyanagi and Z. A. Munir, "Structural Transformation of Stacking Disorder SiC with Densification by Spark Plasma Sintering", Proceedings of 6th Pacific RIM meeting 2005, Ceramic Transaction, "Pulse Electric Current Synthesis and Processing of Materials", Vol.194, 143-152 (2006)
- 14) T. Yamamoto, A. Kaneuchi, T. Nakayama, M. Ohyanagi and Z. A. Munir, "Consolidation of Carbon Material with disordered Structure by Spark Plasma Sintering ", Proceedings of 6th Pacific RIM meeting 2005, Ceramic Transaction, "Pulse Electric Current Synthesis and Processing of Materials", Vol.194, 153-159 (2006)
- 15) T. Imai, Y. Naitoh, T. Yamamoto and M. Ohyanagi, "Translucent nano mullite based composite ceramic fabricated by spark plasma sintering", J. Ceram. Soc. Jpn., Vol. 114, pp.138-140 (2006)
- 16) T. Imai, T. Yamamoto, K. Urabe, H. Nakano, M. Ohyanagi, "Structural change of fired halloysite of the Democratic and People's Republic of Algeria", J. Ceram. Soc. Jpn , Vol.113, Page: 620-5 (2006)
- 17) T. Yamamoto, T. Kondo, Y. Kodera, T. Ishii, M. Ohyanagi and Z. A. Munir, "Mechanical properties of β -SiC fabricated by Spark Plasma Sintering", Journal of materials engineering and performance, Vol. 14, No.4, 460-467(2005).
- 18) U. Anselmi-Tamburini, Z. A. Munir, Y. Kodera, T. Imai T, M. Ohyanagi, "Influence of synthesis temperature on the defect structure of boron carbide: Experimental and modeling studies", J. Am.Ceram. Soc., Vol.88, No.6, Page1382-1387 (2005).
- 19) K. Inoue, M. Ohyanagi, T. Yamamoto, T. Nakayama, H. Suzuki, A. Moriai, "Residual Stress in SiC-C Composite Materials made by Spark Plasma Sintering", Nippon Genshiryoku Kenkyujo: JAERI Review, Page: 128 (2005)
- 20) U. Anselmi-Tamburini, M. Ohyanagi, Z. A. Munir, "Modeling Studies of the Effect of Twins on the X-ray Diffraction Patterns of Boron Carbide", Chem. Mater, Vol.16, 4347-4351 (2004).
- 21) T. Yamamoto, T. Ishii, Y. Kodera, H. Kitaura, M. Ohyanagi, Z. A. MUNIR, "Effect of input energy on Si-C reaction milling and sintering process", J. Ceram. Soc. Jpn. Supplement 112-1 Pacrim Special Issue, S940-945 (2004).
- 22) T. Imai, H. Nakano, K. Urabe, M. Ohyanagi, "Microstructural Observation of Tubular Halloysite with a High-Resolution Transmission Electron Microscope", J. Ceram. Soc. Jpn. Supplement 112 Pacrim Special Issue, S1153-1155 (2004).
- 23) E. M. Heian, S. K. Khalsa, J. W. Lee, Z. A. Munir, T. Yamamoto, M. Ohyanagi, "Synthesis of dense, high-defect-concentration B₄C through mechanical activation and field associated combustion", J. Am. Ceram. Soc., Vol.87, No.5, PP.779-783 (2004)
- 24) T. Yamamoto, H. Kitaura, Y. Kodera, T. Ishii, M. Ohyanagi, Z. A. Munir, "Consolidation of Nanostructured β -SiC by Spark Plasma Sintering", J. Am. Ceram. Soc., Vol.87, No.8, PP.1436-1441 (2004).
- 25) M. Ohyanagi, T. Yamamoto, H. Kitaura, Y. Kodera, T. Ishii, Z.A. Munir, "Consolidation of Nanostructured beta-SiC with Disorder-Order Transformation", Scripta Materialia, Vol.50, No.1, PP111-114 (2004).

- 26) H. Nishihara H, Y. Furutani, Yokota S; M. Ohyanagi; Y. Kumashiro, "Nuclear spin-lattice relaxation of Nb⁹³ in a superconducting NbN synthesized by SHS", Journal of Alloys and Compounds, Vol. 383 , No.1-2, Page: 308-312 (2004).
- 27) T. Hashishin, Y. Kodera, T. Yamamoto, M. Ohyanagi, Z. A. Munir, "Synthesis of (Mg, Si)Al₂O₄ Spinel from Aluminum Dross by Induction Field-Activation", J. Am. Ceram. Soc., Vol.87, No.3, PP.496-499 (2003).
- 28) T Hashishin, T. Yamamoto, M. Ohyanagi, Z.A. Munir, "Simultaneous Synthesis and Densification of Titanium Oxycarbide, Ti(C,O), through Gas-Solid Combustion", J. Am. Ceram. Soc., Vol.86, No.12, PP.2067-2073 (2003).
- 29) M. Ohyanagi, T. Yamamoto, H. Kitaura, K. Shirai, Z. A. Munir, "Spark Plasma Sintering of SiC Nano-Powders", CIMTEC2002, 10th International Congress Part B, P.Vincenzini (Editor), pp175-182 (2003).
- 30) K. Inoue, K, T. Tsujikami, M. Ohyanagi, M. Kawagai, M. Komatsu, M. Sugimoto, N. Minakawa, A. Moriai, T. Kamiyama, K. Oikawa, "Neutron diffraction study of thermal residual strain in three layered materials made by self-propagating high-temperature synthesis", Materials Science Research International, vol.9, no.1, Page: 81-6 (2003).
- 31) M. Shibuya, M. Kawata, M. Ohyanagi, Z. A. Munir, "Titanium diboride-tungsten diboride solid solutions formed by induction-field-activated combustion synthesis", J. Am, Ceram.Soc., vol.86, no.4 , Page: 706-10 (2003).
- 32) M. Shibuya, T. Yoneda, Y. Yamamoto, M. Ohyanagi, Z. A. Munir, "Effect of Ni and Co additives on phase decomposition in TiB₂-WB₂ solid solutions formed by induction field activated combustion synthesis", J. Am, Ceram.Soc., , vol.86, no.2 , Page: 354-6 (2003).
- 33) K. Inoue, T. Tsujikami, M. Ohyanagi, M. Sugimoto, N. Minakawa, A. Moriai, "Residual Strain Measurement of the Three Layers Material, [WC-10mass%Ni / SUS304 / WC-10mass%Ni]", Nippon Genshiryoku Kenkyujo JAERI,Review , Page: 326-327 (2003).
- 34) J.W. Lee, Z. A. Munir , M. Ohyanagi, "Dense nanocrystalline TiB₂-TiC composites formed by field activation from high-energy ball milled reactants", Materials Science and Engineering A-Structural Materials Properties Microstructure and Processing, Vol.325, No.1-2, Page: 221-227 (2002).
- 35) M. Shibuya, M. Ohyanagi, Z. A. Munir, "Simultaneous synthesis and densification of titanium nitride/titanium diboride composites by high nitrogen pressure combustion", J. Am, Ceram. Soc., vol.85, no.12 , Page: 2965-70 (2002).
- 36) M. Nagayama, T. Ikeda, T. Ishikawa, N. Yamura, , M. Ohyanagi, "Three-dimensional numerical simulation of helically propagating combustion waves", Journal of Materials Synthesis and Processing, Vol. 9 , No.3 , Page: 153-163 (2001).
- 37) J. W. Lee, Z. A. Munir, M. Shibuya, M. Ohyanagi, "Synthesis of dense TiB₂-TiN nanocrystalline composites through mechanical and field activation", J. Am, Ceram.Soc., vol. 84, No.6, Page: 1209-1216 (2001).
- 38) D. Kata, K. Shirai, M. Ohyanagi, Z. A. Munir, "Formation mechanism of AlN-SiC solid solution by combustion nitridation in Si₃N₄-Si-Al-C system", J. Am. Ceram. Soc., Vol.84, No.4, Page: 726-32 (2001).
- 39) T. Tsujkikami, K. Inoue, M. Kawagai, M. Ohyanagi, N. Mimakawa, Y. Moriai, T. Saito, "Residual

Strain Measurements of Functionally Gradient Material”, J Phys Soc Jpn, Vol. 70, No. Supplement A, Page: 523-525 (2001).

- 40) M. Ohyanagi, Z. A. Munir, “Covalently-bonded solid solution formed by combustion synthesis”, Korean Journal of Ceramics, vol.6, no.3, Page: 250-7 (2000).
- 41) D. Kata, M. Ohyanagi, Z. A. Munir, ” Induction-field-activated self-propagating high-temperature synthesis of AlN-SiC solid solutions in the Si₃N₄-Al-C system”, Journal of Materials Research, vol.15, no.11, Page: 2514-25 (2000).
- 42) M. Ohyanagi, K. Shirai, N. Balandina, M. Hisa, Z. A. Munir, “Synthesis of aluminum nitride-silicon carbide solid solutions by combustion nitridation”, J. Am. Ceram. Soc., vol.83, no.5, Page1108-12 (2000).
- 43) E. M. Carrillo-Heian, X. Hongyong, M. Ohyanagi, Z.A. Munir, ” Reactive synthesis and phase stability investigations in the aluminum nitride-silicon carbide system”,J. Am. Ceram. Soc., Vol.83, No.5, Page1103-1107 (2000).
- 44) N. Balandina, M. Ohyanagi, and Z.A.Munir, “Formation of SiC-AlN Solid Solution by Combustion Nitridation of Al with SiC,” (Proceeding of International Symposium on Science of Engineering Ceramics II, Osaka, Japan, September 6-9, 1998), *Key Eng. Mater.*, 161-163, 91-94(1999)
- 45) M. Shibuya, M. Ohyanagi, M.Koizumi, ” Densification Process of TiB₂/TiNi Composites through Pressureless SHS”, *International J. SHS*, 8[4], 501-509 (1999)
- 46) T.Tujikami, M. Ohyanagi, M.Koizumi, E.A.Levashov, I.P.Borovinskaya, ”Design of Diamond Gradually-dispersed Material by FEM”, *Materials Science Forum*, Vol.308-311, 1024-1029 (1999)
- 47) E.A.Levashov, A.Kudryashov, M. Ohyanagi, M.Koizumi, S.Hosomi, “Formation of FGM Coating by the New Method of Thermoreactive Electrospark Surface Strengthening (TRESS)”, *Materials Science Forum*, Vol. 308-311, 262-270(1999)
- 48) M. Ohyanagi, T. Tsujikami, S.Sugahara, E. A. Levashov, I. P. Borovinskaya, “Graded Material of Diamond Dispersed TiB₂-Si Composite by SHS/Dynamic Pseudo Isostatic Compaction”, *Materials Science Forum*, Vols. 308-311, 145-150(1999)
- 49) M. Ohyanagi, N.Balandina, K.Shirai, M.Koizumi, Z.A.Munir, “Synthesis of AlN-SiC Solid Solution by Combustion Nitridation”, *Ceramics Transaction (Am. Ceram. Soc.)*, 94, 3-12 (1999)
- 50) E.Levashov, E.Kharlamov, A.Kurdyashov, A.Rogashev, M. Ohyanagi, M.Koizumi, S.Hosomi, “About the Method of Thermoreactive Electrospark Surface Strengthening”, *J. Materials Synthesis and Processing*, Vol. 7, No.1, 23-33 (1999)
- 51) M. Ohyanagi, T.Hiwatashi, M.Koizumi, Z.A.Munir, “Induction Field Activated SHS Compaction”, *Proceedings of 1st Russian-Japanese Workshop on SHS, Karlovy Vary, Czech Republic, Oct.30-Nov.3*, 65-69 (1998)
- 52) M. Ohyanagi, N.Balandina, M.Koizumi, and Z.A.Munir, “Combustion Synthesis of AlN-SiC Solid Solution”, *Proceedings of the 15th International Korea-Japan Seminar on Ceramics*, 286-290 (1998)

- 53) M. Mori, T. Horikawa, T. Tujikami and M. Ohyanagi, "Bending FATigue Strength of Surface Coated Stainless Steel by SHS Process", *ACCM-1(The First Asian-Australasian Conference on Composite Materials)*, 7-9 October 1998, Osaka Japan, 423:1-4(1998)
- 54) H. Yoshida, H. Nishihara, S. Yokota, M. Ohyanagi and T. Nakaoki, "Field-Swept NMR Spectra of ^{11}B in Pyrex Glass and ^{93}Nb in NbN Perturbed by Quadrupole Interaction", *Zeitschrift fur Naturforschung*, 53a, 309-313(1998)
- 55) E.Levashov, I.P.Borobinskaya, A.Rogashov, M.Ohyanagi, S.Hosomi, and M.Koizumi, "Structure and Properties of Novel Diamond-Containing Materials Produced by Forced SHS Densification and Sintering", *International J. SHS*, 7, 103-117 (1998)
- 56) M.Ohyanagi, S.Sugahara, M.Koizumi, "Fabrication of TiC-Based Composites By SHS/Dynamic Pseudo Isostatic Compaction", *Review of High Pressure Science and Technology*, 7, 1066-1068(1998)
- 57) M.Ohyanagi, T.Tsujikami, M.Koizumi, S.Hosomi, E.A.Levashov, I.P.Borovinskaya, "Graded Dispersion of Diamond in TiB₂-Based Cermet by SHS/Dynamic Pseudo Isostatic Compaction (DPIC)", *Proceeding of 4th International Symposium on Functionally Graded Materials, October 21-24, 1996, Tsukuba, Japan, Elsevier Science B.V.*, 289-294(1997)
- 58) E.A.Levashov, I.P.Borovinskaya, A.Y.Yatsenko, M.Ohyanagi, S.Hosomi, M.Koizumi, "SHS-A New Technological Approach For Creation of Novel Multilayered Diamond-Containing Materials With Graded Structure", *Proceeding of 4th International Symposium on Functionally Graded Materials, October 21-24, 1996, Tsukuba, Japan, Elsevier Science B.V.*, 283-288(1997)
- 59) M.Ohyanagi, T.Fukushima, M.Koizumi, "TiC/TiAl Composite Fabricated by SHS/Dynamic Pseudo Isostatic Compaction Through Sand Medium", *Proceeding of the International Conference on Hot Isostatic Pressing, 20-22 May 1996, Andover, Massachusetts*, 289-294
- 60) M.Shibuya, O.Odawara, M.Ohyanagi, M.Koizumi, "Simultaneous Synthesis and Densification of TiN/Ti-Ni Composites by SHS Nitridation", *International J. Self-propagating High Temp. Synthesis*, 5, 77-82(1996)
- 61) M.Ohyanagi, M.Koizumi, S.Hosomi, E.A.Levashov, I.P.Borovinskaya, "Fabrication of Diamond-dispersed Cermets by SHS/Dynamic Pseudo Isostatic Compaction", *International J. Self-propagating High Temp. Synthesis*, 4, 387-392(1995)
- 62) M.Ohyanagi, T.Yamamoto, M.Koizumi, "Wave velocity and Kinetics of TiC Combustion Synthesis", *Proceeding of 8th CIMTEC, on July, 1994 in Italy, Advances in Sciences and Technology*, 3C, 1949-1956(1995)
- 63) M.Ohyanagi, M.Koizumi, "Simultaneous Combustion Synthesis and Sintering of Diamond Dispersed-Ceramics Composite Materials", *J. Soc. Material Sci. Jpn.*, 43, 1379-1380(1994)
- 64) E.A.Levashov, I.P.Borovinskaya, M.Ohyanagi, M.Koizumi, S.Hosomi, "Regurarities of Structure and Phase Formation of SHS Diamond-Containing Function Gradient Materials: Operational Characteristics of Articles Based on Them", *International J. Self-propagating High Temp. Synthesis*, 3, 287-297(1994)
- 65) M.Ohyanagi, M.Shibuya, K.Kobayashi, M.Koizumi, "Dense Layer Formed on Surface of Cylindrical TiC combustion-synthesized", *International J. Self-propagating High Temp. Synthesis*, 3, 261-267(1994)

- 66) M.Ohyanagi, T.Yoshikawa, T.Yamamoto, M.Koizumi, S.Hosomi, E.A.Levashov, K.L.Padyukov, I.P.Borovinskaya, "Diamond Embedded TiC/Ti-Al Composite Fabricated by SHS-Pseudo Isostatic Compaction, *Trans. Mat. Res. Soc. Japan*, 14A, 685 (1994)
- 67) Y.Miyamoto, M.Ohyanagi, "Development of functionality ceramic composites by SHS routes", *New Functionality Materials*, Vol.C, 145 (1993)
- 68) E.A.Levashov, I.Borovinskaya, A.Rogachov, M.Koizumi, M.Ohyanagi, S.Hosomi, "SHS: A New Method for Production of Diamond-Containing Ceramics", *International J. Self-propagating High Temp. Synthesis*, 2, 189 (1993)
- 69) M.Ohyanagi, M.Kanno, M.Koizumi, "TiC Combustion Synthesis and Fabrication of a Body with a Densified Surface Layer by the Pressureless Method", *J. Materials Synthesis and Processing*, 1, 311 (1993)
- 70) M.Ohyanagi, Y.Taketani, Y.Nakamura, E.Kamijou, and M.Koizumi, "Application of SHS Technology: Instantaneous Bonding of Diamond by Brazing", *Am. Cer. Soc., Cer. Bull.*, 72, 86 (1993)
- 71) M.Ohyanagi, M.Koizumi, Y.Miyaji, H.Izawa, and N.Inumaru, "SiC Coating Carbon Block by SHS Method", *J. Materials Sci., Letter*, 12, 513 (1993)
- 72) M.Ohyanagi, M.Koizumi, K.Tanihata, Y.Miyamoto, O.Yamada, I.Matsubara and H.Yamashita, "Production of Superconducting NbN Thin Plate and Wire by SHS Method", *J. Materials Sci., Letter*, 12, 500 (1993)
- 73) M.Ohyanagi, M.Kanno, M.Koizumi, "Characteristic TiC Body Fabricated by Combustion Synthesis Using Reactant Compact with density of More Than 80%", *Proc. of Int. Conf. on Adv. Syn. of Engineered Structural Materials, on Sept., 1992 in San Francisco ASM* 33-36, Feb., 31(1993)
- 74) M.Ohyanagi, Y.Taketani, Y.Nakamura, E.Kamijou, and M.Koizumi, "Instantaneous Bonding of Diamond-Metal by SHS Reaction Heat", *International J. Self-propagating High Temp. Synthesis*, 1, 325 (1992)
- 75) M.Ohyanagi, M.Kanno, and M.Koizumi, "Characterization of TiC Formed by SHS", *International J. Self-propagating High Temp. Synthesis*, 1, 125 (1992)
- 76) Ohyanagi, K.Urabe, K.Sakuma, and M.Koizumi, "Microstructure of TiC Formed by Combustion Synthesis", *Materials Science Monographs*, 66C, 1763 (1991)
- 77) 高橋 章, 谷畑 公昭, 宮本 欽生, 大柳 満之, 小泉 光恵, 山田 修, "Nb-N 傾斜機能材料の燃焼合成", *粉体および粉末冶金*, 37, 83 (1990)
- 78) M.Ohyanagi, H.Nishide, K.Suenaga, and E.Tsuchida, "Oxygen-Permselectivity in New Type Polyorgano-siloxanes with Carboxy Group on the Side Chain", *Polymer Bulletin*, 23, 637 (1990)
- 79) M.Ohyanagi and F.C.Anson, "Electrochemical Behavior of Electroactive Counterions in Solutions of Polyelectrolyte", *J. Phys. Chem.*, 93, 8377 (1989)
- 80) M.Ohyanagi and F.C.Anson, "Electrodeposition of Polyelectrolyte-Metal Complexes", *J. Electroanal. Chem.*, 258, 469 (1989)

- 81) H.Nishide, M.Ohyanagi, K.Suenaga, and E.Tsuchida, "Oxygen-Permeation in Silicone-bound Cobaltporphyrin Membrane", *J. Polymer Sci., Part A : Polymer Chemistry*, 27, 1439 (1989)
- 82) H.Nishide, M.Ohyanagi, O.Okada, and E.Tsuchida, "Oxygen-Binding and -Transport in the Membrane of Poly[[tetrakis(methacrylamidophenyl)porphinato]cobalt-co- hexylmethacrylate]", *Macromolecules*, 21, 2910 (1988)
- 83) E.Tsuchida, H.Nishide, and M.Ohyanagi, "Facilitated Transport of Molecular Oxygen in the Membrane of Macromolecular Cobalt-Porphirin Complex : Modification of Dual-Mode Transport Model", *J. Macromol. Sci.-Chem.*, A25(10&11), 1327 (1988)
- 84) E.Tsuchida, H.Nishide, M.Ohyanagi, and O.Okada, "Oxygen Diffusion via the Cobalt Porphyrin Complexes Fixed in a Polymer Matrix", *J. Phys. Chem.*, 92, 6461 (1988)
- 85) M.Ohyanagi, H.Nishide, S.Toda, and E.Tsuchida, "Facilitated Oxygen Transport in Polymer Ligand-Coordinated Porphinato Cobalt Membrane", *J. Coord. Chem.*, 18, 69 (1988)
- 86) M.Ohyanagi, H.Nishide, K.Suenaga, and E.Tsuchida, "Synthesis of Polyorganosiloxane with N-(4-pyridyl)amido Group on the Side Chain", *Chem. Lett.* 1987, 2309
- 87) M.Ohyanagi, H.Nishide, K.Suenaga, and E.Tsuchida, "Effect of Polymer Matrix and Metal Species on Facilitated Oxygen Transport in Metalloporphyrin (Oxygen Carrier) Fixed Membrane", *Macromolecules*, 21, 1590 (1988)
- 88) H.Nishide, M.Ohyanagi, Y.Funada, T.Ikeda, and E.Tsuchida, "Oxygen transport behavior through the membrane containing a fixed carrier and Adhered to a second polymer", *Macromolecules*, 20, 2312 (1987)
- 89) M.Ohyanagi, H.Nishide, K.Suenaga, T.Nakamura, and E.Tsuchida, "Effect of Polymer Matrices on Oxygen-Binding of a Cobalt Porphyrin Complex", *Bull. Chem. Soc. Jpn.*, 60, 3045 (1987)
- 90) E.Tsuchida, H.Nishide, M.Ohyanagi, and H.Kawakami, "Facilitated transport of molecular oxygen in the membrane polymer-coordinated cobalt schiff base complexes", *Macromolecules*, 20, 1907 (1987)
- 91) H.Nishide, M.Ohyanagi, O.Okada, and E.Tsuchida, "Spectroscopic study of oxygen sorption and diffusion in a membrane containing a cobalt porphyrin complex", *Polymer J.*, 19, 839 (1987)
- 92) H.Nishide, M.Ohyanagi, O.Okada, and E.Tsuchida, "Dual-mode transport of molecular oxygen in a membrane containing a cobalt porphyrin complex as a fixed carrier", *Macromolecules*, 20, 417 (1987)
- 93) M.Ichikawa, S.Katagiri, T.Yamanaka, M.Ohyanagi, K.Ikeda, and Y. Sekine, "Tetramethyl-p-sil-phenylenesiloxane/dimethylsiloxane block and graft copolymer as selective permeable membrane", *Polymer*, 28, 269 (1987)
- 94) H.Nishide, M.Ohyanagi, O.Okada, and E.Tsuchida, "Highly selective transport of molecular oxygen in a polymer containing a cobalt porphyrin complex as a fixed carrier", *Macromolecules*, 19, 494 (1986)
- 95) H.Nishide, M.Ohyanagi, H.Kawakami, and E.Tsuchida, "Dual-mode transport of molecular

- oxygen through the membrane of poly(octylmethacrylate-co-4-vinylpyridine) (N,N'-disalicylideneethylenediamine) cobalt(II) complex", *Bull. Chem. Soc. Jpn.*, 59, 3213 (1986)
- 96) H.Nishide, M.Kuwahara, M.Ohyanagi, Y.Funada, H.Kawakami, and E. Tsuchida, "Oxygen permeation in the membrane of poly(octylmethacrylate-co-4-vinylpyridine)-salicylaldehydeethylenediimine cobalt complex", *Chem. Lett.*, 1986, 43
- 97) Y.Ueno, H.Yoshio, M.Ohyanagi, K.Ikeda, and Y.Sekine, "Synthesis of silica gels containing imidazole groups and their binding affinity for methyloange in water", *Polymer*, 27, 627 (1986)
- 98) Y.Katayama, T.Kato, M.Ohyanagi, K.Ikeda, and Y.Sekine, "The glass transition temperatures (T_g) of polyorganosiloxanes with various functional groups", *Makromol. Chem., Rapid Commun.*, 7, 465 (1986)
- 99) Y.Katayama, T.Kato, M.Ohyanagi, H.Naruse, K.Ikeda, and Y.Sekine, "Syntheses of poly[(3-alkoxy-carboxylpropyl)methylsiloxane]s and poly[[3-(2-hydroxy-ethoxycarbonyl)propyl]methylsiloxane]", *Makromol. Chem., Rapid Commun.*, 7, 153 (1986)
- 100) M.Ohyanagi, H.Kanai, T.Takashima, K.Ikeda, and Y.Sekine, "Thermal properties of Poly-(2-carboxy-ethylmethylsiloxane)-Poly(dimethylsiloxane) complexes", *Makromol. Chem.*, 187, 1169 (1986)
- 101) M.Ohyanagi, H.Kanai, Y.Katayama, K.Ikeda, and Y.Sekine, "Synthesis of Poly(2-carboxy-ethylmethyl-siloxane)", *Polymer Commun.*, 26, 249 (1985)
- 102) M.Ohyanagi, K.Ikeda and Y.Sekine, "Formation of Poly(2-carboxyethylmethylsiloxane)-poly(dimethyl-siloxane) complexes with Hydrogen Bonds in the Absence of Solvent", *Makromol. Chem., Rapid Commun.*, 4, 795 (1983)

