

原著論文 (すべてのリスト)

- 1) Behaviour of gold metal as an impurity for the chemical vapor deposition of titanium nitride whiskers on quartz glass, K. Sugiyama, Y. Takahashi, and S. Motojima, *Chem. Lett.*, 1975, 363-366
- 2) Chemical vapor growth of titanium diboride whisker, S. Motojima, F. Sugimori, Y. Takahashi, and K. Sugiyama, *Bull. Chem. Soc. Jpn.*, 48, 3156-3160(1975).
- 3) Chemical vapor deposition of zirconium diboride whiskers, S. Motojima, F. Sugimori, Y. Takahashi and K. Sugiyama, *Denki Kagaku*, 43, 323-328(1975).
- 4) Chemical vapor deposition of niobium diboride (NbB_2), S. Motojima, K. Sugiyama, and Y. Takahashi, *J. Cryst. Growth*, 30, 233-239(1975).
- 5) Chemical vapour deposition of zirconium phosphide whiskers, S. Motojima, Y. Takahashi, and K. Sugiyama, *J. Cryst. Growth*, 30, 1-8(1975).
- 6) Metallic impurity-activated crystal growth of boron phosphide by chemical vapor deposition and its physical properties, S. Motojima, Y. Miura, K. Sugiyama, and Y. Takahashi, *Bull. Chem. Soc. Jpn.*, 48, 3161-3167(1975).
- 7) Chemical vapor deposition of tetraboron silicide whiskers, S. Motojima, K. Sugiyama, and Y. Takahashi, *Bull. Chem. Soc. Jpn.*, 48, 1463-1466(1975).
- 8) Selective growth of NbO whisker, S. Motojima, Y. Takahashi, and K. Sugiyama, *Yogyo Kyokai-Shi*, 83, 510-516(1975).
- 9) Low temperature deposition of metal nitrides by thermal decomposition of organometallic compounds, K. Sugiyama, S. Pac, Y. Takahashi, and S. Motojima, *J. Electrochem. Soc.*, 122, 1545-1549(1975).
- 10) 炭素繊維のチタナイジングについて、元島栖二、越智 豊、鈴木信幸、高橋康隆、杉山幸三、金属表面技術、26, 446-450(1975).
- 11) Crystal growth and some properties of titanium monophosphide, S. Motojima, T. Wakamatsu, Y. Takahashi, and K. Sugiyama, *J. Electrochem. Soc.*, 123, 290-295(1976).
- 12) Impurity metal-activated crystal growth of niobium monophosphide from gas phase, S. Motojima, T. Izushi, K. Sugiyama, and Y. Takahashi, *Bull. Chem. Soc. Jpn.*, 49, 2122-2128(1976).
- 13) Single crystal growth of titanium nitride by chemical vapour deposition and measurement of the linear growth rate on a (100) plane, S. Motojima, K. Baba, K. Kitatani, Y. Takahashi, and K. Sugiyama, *J. Cryst. Growth*, 32, 141-148(1976).
- 14) Anomalous pillar-shaped crystal growth of zirconium disulfide, S. Motojima, Y. Takahashi, and K. Sugiyama, *J. Cryst. Growth*, 33, 116-124(1976).
- 15) A quick survey method for the study of CVD conditions, S. Motojima, K. Ozaki, Y. Takahashi, and K. Sugiyama, *J. Cryst. Growth*, 43, 264-266(1978).
- 16) Chemical vapor growth of titanium diboride by a modified hot wire method, K. Sugiyama, S. Iwakoshi, S. Motojima, and Y. Takahashi, *J. Cryst. Growth*, 43, 533-536(1978).
- 17) Chemical vapor growth of LaB_6 whiskers and crystals having a sharp tip, S. Motojima, Y. Takahashi, and K. Sugiyama, *J. Cryst. Growth*, 44, 106-109(1978).
- 18) Chemical vapor deposition of titanium disulfide, S. Motojima, K. Itoh, Y. Takahashi, and K. Sugiyama, *Bull. Chem. Soc. Jpn.*, 51, 3240-3244(1978).
- 19) On the relations between the number of gold drops and TiP whiskers in VLS growth, K. Sugiyama, M. Takigawa, S. Motojima, and Y. Takahashi, *J. Cryst. Growth*, 44, 499-501(1978).
- 20) Single crystal growth of zirconium carbide by a modified hot-filament method, K. Sugiyama, H. Mizuno, S. Motojima, and Y. Takahashi, *J. Cryst. Growth*, 44, 617-620(1978).
- 21) Tantalum-carbon bond formation in the thermal decomposition of tantalum diethylamide, Y. Takahashi, N. Onoyama, S. Motojima, and K. Sugiyama, *Chem. Lett.*, 1978, 525-528.
- 22) Single crystal growth of zirconium nitride by modified filament-method, K. Sugiyama, K. Watanabe, S. Motojima and Y. Takahashi, *Bull. Chem. Soc.*, 52, 420-424 (1979).
- 23) Boron phosphide coatings on molybdenum by chemical vapour deposition, and their composition and microhardness, S. Motojima, Y. Ohtsuka, S. Kawajiri, Y. Takahashi and K. Sugiyama, *J. Mater. Sci.*, 14, 496-498 (1979).
- 24) Impurity activated whisker growth of zirconium nitride by chemical vapour deposition, S. Motojima, E. Kani, Y. Takahashi and K. Sugiyama, *J. Mater. Sci.*, 14, 1495-1499 (1979).

- 25) Single crystal growth of titanium carbide from the vapor by a modified hot wire method, K. Sugiyama, H. Mizuno, S. Motojima, and Y. Takahashi, *J. Cryst. Growth*, 46, 788-794 (1979).
- 26) Chemical vapor deposition of nickel phosphide Ni₂P, S. Motojima, K. Haguri, Y. Takahashi and K. Sugiyama, *J. Less-Common Met.*, 64, 101-106 (1979)
- 27) Formation of a double layer by the reaction of titanium monophosphide with oxygen or sulphur dioxide, S. Motojima, T. Wakamatsu, Y. Takahashi and K. Sugiyama, *J. Less -Common Met.*, 68, 85-89 (1979).
- 28) Chemical vapor deposition of tantalum diboride, S. Motojima and K. Sugiyama, *J. Mater. Sci.*, 14, 2859-2864 (1979).
- 29) Low temperature deposition of a refractory aluminium compound by the thermal decomposition of aluminium dialkylamides, Y. Takahashi, K. Yamasita, S. Motojima, and K. Sugiyama, *Surf. Sci.*, 86, 238-245 (1979).
- 30) Pillar crystal growth of boron phosphide from the vapour in the presence of nickel impurity, S. Motojima, S. Yokoe and K. Sugiyama, *J. Cryst. Growth*, 49, 1-6 (1980).
- 31) Vapor deposition of thin cadmium sulfide layers using thermal decomposition of dithiolatocadmium complexes, Y. Takahashi, R. Yuki, M. Sugiura, S. Motojima and K. Sugiyama, *J. Cryst. Growth*, 50, 491-497 (1980).
- 32) Chemical vapour growth of CrB₂ and CrB crystals, S. Motojima and K. Sugiyama, *J. Crst. Growth*, 51, 568-572 (1981).
- 33) Chemical vapor deposition of mixed phase α -AlB₁₂-B, S. Motojima, K. Takei and K. Sugiyama, *J. Nucl. Mater.*, 98, 151-156 (1981).
- 34) Chemical vapor growth of Cr₅Si₃ whiskers and hollow crystals, S. Motojima and K. Sugiyama, *J. Cryst. Growth*, 55, 611-613 (1981).
- 35) The boronization of nickel plate and some of its properties, S. Motojima, K. Maeda and K. Sugiyama, *J. Less-Common Met.*, 81, 267-272 (1981).
- 36) Further investigation on the thermal decomposition of aluminium dialkylamides, Y. Takahashi, K. Mutoh, S. Motojima and K. Sugiyama, *J. Mater. Sci.*, 16, 1217-1222 (1981).
- 37) Corrosion stability of vapour -deposited transition metal phosphides at high temperature, S. Motojima, T. Wakamatsu and K. Sugiyama, *J. Less-common Met.*, 82, 379-383 (1981)
- 38) Low temperature deposition of hexagonal BN films by chemical vapour deposition, S. Motojima, Y. Tamura and K. Sugiyama, *Thin Solid Films*, 88, 269-274 (1982).
- 39) Molybdenum disilicide coating on steel and its oxidation resistance, S. Motojima, A. Fujimoto, and K. Sugiyama, *J. Mater. Sci. Lett.*, 1, 19-22 (1982).
- 40) Hardness and oxidation resistivity of MoSi₂, S. Motojima, H. Yoshida and K. Sugiyama, *J. Mater. Sci. Lett.*, 1, 23-24 (1982).
- 41) Low-temperature deposition of TiB₂ on copper and some properties data, S. Motojima, Y. Yamada and K. Sugiyama, *J. Nucl. Mater.*, 105, 262-268 (1982).
- 42) Low-temperature deposition of TaB and TaB₂ by chemical vapor deposition, S. Motojima, K. Kito and K. Sugiyama, *J. Nucl. Mater.*, 105, 262-268 (1982).
- 43) Deposition and whisker growth of Cr₃C₂ by CVD process, S. Motojima and S. Kuzuya, *J. Cryst. Growth*, 71, 682-688 (1985).
- 44) Deposition and hollow crystal growth of CrP and Cr₃P by CVD process, S. Motojima and T. Higashi, *J. Cryst. Growth*, 71, 639-647 (1985)
- 45) Preparation of Ni₂P by diffusion process and its crystal growth, S. Motojima, M. Naito and H. Hayashi, *J. Cryst. Growth*, 73, 111-116 (1985).
- 46) Resistivities against sea - water corrosion and sea - sands abrasion of TiB₂-coated copper plate, S. Motojima and H. Kosaki, *J. Mater. Sci. Lett.*, 4, 1350-1352 (1985).
- 47) Corrosion and abrasion resistivities against sea water and sea sands of TaB₂-coated copper plate, S. Motojima and K. Kobayashi, *J. Less-common Met.*, 114, 375-378 (1985).
- 48) Deposition and microhardness of SiC from the Si₂Cl₆-C₃H₈-H₂-Ar system, S. Motojima, N. Iwamori, T. Hattori and K. Kurosawa, *J. Mater. Sci.*, 21, 1363-1367 (1986).
- 49) Phosphidation of cobalt plate and some of its properties, S. Motojima and Y. Nakayama, *J. Less-Common Met.*, 118, 109-115 (1986).
- 50) Corrosion and abrasion resistivities to sea water and whirled sea sand of TiN-coated stainless steel, S. Motojima, N. Kohno, *Thin Solid Films*, 137, 59-63 (1986).
- 51) Chemical vapour deposition of SiC and some of its properties, S. Motojima, H. Yagi and N.

- Iwamori, J. *Mater. Sci. Lett.*, 5, 13-15 (1986).
- 52) Chemical vapor deposition of Si_3N_4 from a gas mixture of Si_2Cl_6 , NH_3 and H_2 , S. Motojima, N. Iwamori and T. Hattori, *J. Mater. Sci.*, 21, 3836-3842 (1986).
 - 53) Preparation and some properties of CoB layers and crystals prepared by diffusion and CVD processes, S. Motojima and Y. Ihama, *J. Cryst. Growth*, 76, 373-378 (1986).
 - 54) Preparation and properties of cobalt silicides by diffusion and CVD processes using Si_2Cl_6 as a silicon source, S. Motojima, S. Kuri and T. Hattori, *J. Less-Common Met.*, 124, 193-204 (1986).
 - 55) Preparation and properties of nickel silicide layers by the diffusion and CVD processes using Si_2Cl_6 as a source of silicon, S. Motojima, M. Kohno and T. Hattori, *J. Mater. Sci.*, 22, 547-553 (1987).
 - 56) Vapor -phase siliconizing of some Ni-base alloys and transition metals using Si_2Cl_6 as a source of silicon, S. Motojima, M. Kohno and T. Hattori, *J. Mater. Sci.*, 22, 770-774 (1987).
 - 57) Siliconizing of molybdenum plate using Si_2Cl_6 and some of its properties, S. Motojima, C. Uchida, N. Iwamori and T. Hattori, *J. Mater. Sci.*, 22, 877-881 (1987).
 - 58) Vapour -phase siliconizing of iron plate and crystal growth of FeSi_2 using Si_2Cl_6 as a source of silicon, S. Motojima, T. Hattori and K. Yamaguchi, *J. Cryst. Growth*, 85, 309-317 (1987).
 - 59) Chemical vapour growth of β -SiC whiskers from a gas mixture of Si_2Cl_6 - CH_4 - H_2 - Ar, S. Motojima, M. Hasegawa and T. Hattori, *J. Cryst. Growth*, 87, 311-317 (1988).
 - 60) TiB_2 coatings on phosphor - bronze plates by CVD and their properties, S. Motojima and H. Hotta, *J. Less-Common Met.*, 141, 327-333 (1988).
 - 61) TiN coatings on copper and phosphor - bronze plates by the CVD process, and their oxidation and corrosion stabilities, S. Motojima and H. Mizutani, *J. Mater. Sci.*, 23, 3435-3439 (1988).
 - 62) Chemical vapour deposition of TiB_2 protective layers on a brass plate, S. Motojima and R. Azuma, *J. Mater. Sci.*, 23, 4375-4378 (1988).
 - 63) Growth of regularly coiled spring-like fibers of Si_3N_4 by iron impurity-activated chemical vapor deposition, S. Motojima, S. Ueno, T. Hattori, and K. Goto, *Appl. Phys. Lett.*, 54, 1001-1003 (1989).
 - 64) Preparation of TiN films by photochemical vapor deposition, S. Motojima and H. Mizutani, *Appl. Phys. Lett.*, 54, 1104-1105 (1989).
 - 65) Crystal growth of new ternary compounds $(\text{Cr}_{1-x}\text{Fe}_x)_5\text{Si}_3$ on vapour -phase-siliconized stainless steel, S. Motojima, C. Ohashi, T. Hattori and H. Iwanaga, *Mater. Sci. & Eng.*, B2, L1-L3 (1989).
 - 66) Single crystal growth of Cr_3Si and Cr_5Si_3 using in -situ CVD process, S. Motojima, C. Ohashi, T. Hattori and H. Iwanaga, *J. Cryst. Growth*, 96, 127-134 (1989).
 - 67) Preparation of whiskers and spring - like fibers of Si_3N_4 by impurity-activated chemical vapour deposition, S. Motojima, S. Ueno, T. Hattori, and H. Iwanaga, *J. Cryst. Growth*, 96, 383- 389 (1989).
 - 68) Crystal growth of Cr-Fe-Si Compounds by vapour-phase siliconizing of stainless steel 302, S. Motojima, C. Ohashi, T. Hattori and H. Iwanaga, *J. Less-Common Met.*, 153, 127-132 (1989).
 - 69) Crystal growth of iron silicocide by chemical vapour deposition, S. Motojima, E. Itoh, and T. Hattori, *J. Mater. Sci. Lett.*, 8, 912-914(1989).
 - 70) Growth of regularly coiled carbon filaments by Ni catalyzed pyrolysis of acetylene, and their morphology and extension characteristics, S. Motojima, M. Kawaguchi, K. Nozaki and H. Iwanaga, *Appl. Phys. Lett.*, 56(4), 321-323 (1990).
 - 71) Preparation of TiB_2 films by photochemical vapor deposition using a D_2 lamp, S. Motojima and H. Mizutani, *Appl. Phys. Lett.*, 56, 916-918 (1990).
 - 72) Preparation of novel B-N-P ternary films by chemical vapor deposition, S. Motojima, H. Hotta and K. Goto, *Mater. Lett.*, 8, 457-460 (1990).
 - 73) Preparation of $(\text{Cr}_{0.45}\text{Fe}_{0.55})_5\text{Si}_3$ crystals by vapour phase siliconizing of stainless steel 310 and their properties, S. Motojima, C. Itoh and H. Iwanaga, *Mater. Sci. & Eng.*, B5, 445-449 (1990).
 - 74) Amorphous Si_3N_4 wiskers containing a crystalline core, H. Iwanaga, S. Motojima, M. Ichihara and S. Takeuchi, *J. Cryst. Growth*, 100, 271-274 (1990).
 - 75) Preparation of TiC films by photochemical vapour deposition using a D_2 lamp, S. Motojima and H. Mizutani, *Thin Solid Films*, 186, L17-L20 (1990).
 - 76) Chemical vapour deposition of SiC layers from a gas mixture of CH_3SiCl_3 + H_2 +Ar, S. Motojima and M. Hasegawa, *Thin Solid Films*, 186, L39-L45 (1990).
 - 77) Morphology of coiled whiskers of amorphous Si_3N_4 and their mechanical properties, H. Iwanaga,

- T. Iwasaki, S. Motojima and S. Takeuchi, *J. Mater. Lett.*, 9, 731-734 (1990).
- 78) セラミックファイバー製マイクロばねの引張り試験法, 岩永 浩、岩崎 武、元島栖二、表面技術、41, 578-579 (1990).
 - 79) Chemical vapor deposition of SiC layers from a gas mixture of $\text{CH}_3\text{SiCl}_3+\text{H}_2(+\text{Ar})$ and effects of the linear velocity and Ar addition, S. Motojima and M. Hasegawa, *J. Vac. Sci. & Technol.*, A, 8(5), 3763-3768 (1990).
 - 80) Preparation of coiled ceramic fibers by CVD, S. Motojima, M. Kawaguchi, K. Nozaki and H. Iwanaga, *Proc. 11th Int. Conf. on CVD*, pp.573-579(1990, Seattle) .
 - 81) ZrB_2 coated on copper plate by chemical vapour deposition, and its corrosion and oxidation stabilities, S. Motojima, K. Funahasi and K. Kurosawa, *Thin Solid Films*, 189, 73-79(1990).
 - 82) Crystal morphology of ternary comound $(\text{Cr,Fe})_5\text{Si}_3$ obtained by in-situ chemical vapor deposition, S. Motojima, C. Itoh and H. Iwanaga, *J. Mater. Sci.*, 26, 1467-1472(1991).
 - 83) Preparation of coiled carbon fibers by catalytic pyrolysis of acetylene, and its morphology and extention characteristics, S. Motojima, M. Kawaguchi, K. Nozaki and H. Iwanaga, *Carbon*, 29(3), 379-385 (1991).
 - 84) Preparation of SiC films by photochemical vapour deposition using a D_2 lamp, S. Motojima and S. Mano, *J. de Phys.*, IV, C2, 365-371 (1991).
 - 85) Dimethylvinylsilylation of $\text{Si}_8\text{O}_{20}^{8-}$ silicate anion in methanol solutions of tetramethylammonium silicate, I. Hasegawa and S. Motojima, *Organometal. Chem.*, 441, 373-380 (1992).
 - 86) Preparation of coiled fibers of carbon, graphite and TiC by chemical vapor deposition, S. Motojima, I. Hasegawa, M. Kawaguchi, K. Nozaki, and H. Iwanaga, *J. Chem. Vapor deposition*, 1, 137-156 (1992).
 - 87) A growth mechanism of regularly coiled carbon fibers through acetylene pyrolysis, M. Kawaguchi, K. Nozaki, S. Motojima and H. Iwanaga, *J. Cryst. Growth*, 118, 309-313 (1992).
 - 88) Preparation and structure of SiC whiskers from grasses containing silica, S. Motojima, I. Hasegawa, T. Ikawa and H. Iwanaga, *J. Chem. Vapor Deposition*, 1, 181-190 (1992).
 - 89) Preparation and properties of coiled carbon fibers by the catalitic pyrolysis of acetylene, S. Motojima, I. Hasegawa, S. Kagiya, S. Asakura, M. Kawaguchi and H. Iwanaga, *J. de Physique*, IV, C3, 599-606 (1993).
 - 90) Preparation of coiled carbon fibers by pyrolysis of acetylene using a Ni catalyst and sulfur or phosphorus impurity, S. Motojima, I. Hasegawa, S. Kagiya, M. Momiyama, M. Kawaguchi and H. Iwanaga, *Appl. Phys. Lett.*, 62 (19), 2322-2323 (1993).
 - 91) Synthesis of silica-based inorganic-organic hybrid porous materials by the building block approach, I. Hasegawa, M. Ishida and S. Motojima, *Proc.1st Euro. Workshop on Hybrid Org. -Inorg. Mater.*, (1993, Bierville).
 - 92) Impurity-activated chemical vapor growth of the micro-coiled carbon fibers, S. Motojima, M. Hirata, and H. Iwanaga, *J. Chem. Vapor Deposition*, 3, 87-99 (1994).
 - 93) Chemical vapour deposition of β -TiP whikers and thir morphology, S. Motojima, I. Hasegawa, S. Hirano, M. Fujii and H. Iwanaga, *J. Chem. Vapor Deposition*, 3, 65-81 (1994).
 - 94) Preparation and properties of new ternary compound crystals of $(\text{Cr, Fe})_3\text{Si}_2$ by in-situ chemical vapor deposition, S. Motojima, Z. Matsusima, S. Gakei, M. Fujii and H. Iwanaga, *Mater. Sci. Eng.*, B27, 73-79 (1994).
 - 95) Effect of metal impurities on the growth of micro-coiled carbon fibers by pyrolysis of acetylene, S. Motojima, S. Asakura, M. Hirata and H. Iwanaga, *Mater. Sci. Eng.*, B34, L9-L11(1995).
 - 96) Vapour phase formation of micro-coiled carbon fibers using Ni catalyst and PH_3 impurity, S. Motojima, S. Kagiya and H. Iwanaga, *Mater. Sci. Eng.*, B34, 47-52 (1995).
 - 97) Preparation of micro-coiled TiC fibers by metal impurity-activated chemical vapor deposition, S. Motojima and H. Iwanaga, *Mater. Sci. Eng.*, B34, 159-163 (1995).
 - 98) Preparation of micro-coiled Si_3N_4 fibers by impurity metal activated chemical vapor deposition and their mechanical properties, S. Motojima, T. Yamana, T. Araki and H. Iwanaga, *J. Electrochem. Soc.*, 142(9), 3141-3148 (1995)
 - 99) Preparation of micro-coiled carbon fibers by metal powder activated pyrolysis of acetylene containing a small amount of sulfur compounds, S. Motojima, Y. Itoh, S. Asakura, and H. Iwanaga, *J. Mater. Sci.*, 30, 5049-5055(1995).
 - 100) Vapor phase preparation of micro-coiled carbon fibers by metal powder catalyzed pyrolysis of acetylene containing a small amount of phosphorus impurity, S. Motojima, I. Hasegawa, S. Kagiya,

- K. Andoh and H. Iwanaga, *Carbon*, 33(8), 1167-1173(1995).
- 101) Vapor growth of micro-coiled ceramic fibers and their properties, S. Motojima, I. Hasegawa and H. Iwanaga, *J de Phys.*, IV, C5, 1061-1068(1995).
 - 102) Preparation and characterization of SiC-coated C/C composites using pulse chemical vapor deposition (pulse-CVD), A. Sakai, N. Kitamori, K. Nishi and S. Motojima, *Mater. Lett.*, 25, 61-64 (1995).
 - 103) Preparation of SiC and Si₃N₄ whiskers using bean-curd refuse as the Si source, S. Motojima, Y. Ogawa, S. Gakei and H. Iwanaga, *Mater. Sci. Eng.*, B30, 13-17(1995).
 - 104) Vapor growth of TiP whiskers by VLS mechanism using silicon-transition metal mixed impurity, S. Motojima, I. Hasegawa, S. Hirano, K. Kurosawa and H. Iwanaga, *Mater. Lett.*, 22, 255-257(1995).
 - 105) Preparation of Si₃N₄ whiskers by reaction of wheat husks with NH₃, S. Motojima, Y. Hori, S. Gakei and H. Iwanaga, *J. Mater. Sci.*, 30, 3888-3892(1995).
 - 106) Catalytic effects of metal carbides, oxides and Ni single crystal on the vapor growth of micro-coiled carbon fibers, S. Motojima, S. Asakura, T. Kasemura, S. Takeuchi and H. Iwanaga, *Carbon*, 34(3), 289-296 (1996).
 - 107) Preparation of micro-coiled SiC fibers by chemical vapor deposition and their morphology, S. Motojima, T. Hamamoto and H. Iwanaga, *J. Cryst. Growth*, 158, 79-83(1996).
 - 108) NiAl diffusion coatings on Inconel 738 using a pre-heated AlCl₃+H₂ gas mixture, T. Araki and S. Motojima, *J. Euro. Ceram. Soc.*, 16, 1141-1144(1996).
 - 109) Aluminide diffusion coatings on Inconel 738 using a pre-heated AlCl₃+H₂ gas mixture, T. Araki and S. Motojima, *Mater. Sci. Eng.*, B39, L1-L4(1996).
 - 110) Chemical vapour growth of HfC whiskers and their morphology, S. Motojima and Y. Kawashima, *J. Mater. Sci.*, 31, 3697-3700(1996).
 - 111) Preparation and characterization of SiC/C and C/SiC/C composites using pulse chemical vapor infiltration process, A. Sakai, J. Gotoh and S. Motojima, *Mater. Sci. Eng.*, B38, 29-35(1996).
 - 112) Examination and computational fluid dynamics study on the gas flow in two different reaction vessels of pressure pulse chemical vapour infiltration, A. Sakai, K. Nishi and S. Motojima, *J. Mater. Sci. Lett.*, 15, 708-711(1996).
 - 113) Preparation of micro-coiled ZrC fibers by vapour phase metallizing of micro-coiled carbon fibers, S. Motojima, H. Asano and H. Iwanaga, *J. Euro. Ceram. Soc.*, 16, 989-993(1996).
 - 114) Chemical vapour growth of HfP whiskers and their properties, S. Motojima, S. Hirano, M. Fujii, and H. Iwanaga, *J. Mater. Sci.*, 31, 5709-5715(1996).
 - 115) Preparation of micro-coiled SiC and TiC fibers by vapour phase metallizing of micro-coiled carbon fibers, S. Motojima, S. Kagiya and H. Iwanaga, *J. Mater. Sci.*, 31, 4641-4645(1996).
 - 116) Chemical vapor deposition of α -ZrP whiskers, S. Motojima, S. Hirano, K. Kurosawa and H. Iwanaga, *J. Mater. Res.*, 11(5), 1157-1163(1996).
 - 117) CVD growth and morphology of transition-metal phosphides, M. Fujii, H. Iwanaga and S. Motojima, *J. Cryst. Growth*, 166, 99-103(1996).
 - 118) Preparation and high temperature properties of novel ceramic micro-coils, S. Motojima, Y. Kojima, T. Hamamoto, N. Ueshima and H. Iwanaga, *Electrochem. Soc. Proc.*, 97-39, 595-602(1997).
 - 119) Preparation and properties of ceramic micro-coils by CVD process, S. Motojima, T. Hamamoto, N. Ueshima, Y. Kojima and H. Iwanaga, *Electrochem. Soc. Proc.*, 97-25, 433-440(1997).
 - 120) カーボンマイクロコイルの電気伝導、金藤敬一、鶴田 信、元島栖二、電学論 A, 118-A (12), 1425-1428(1998).
 - 121) Three-dimensional growth mechanism of cosmo-mimetic carbon microcoils obtained by chemical vapor deposition, S. Motojima and X. Chen, *J. Appl. Phys.*, 85(7), 3919-3921(1999).
 - 122) The growth patterns and morphologies of carbon micro-coils produced by chemical vapor deposition, X. Chen and S. Motojima, *Carbon*, 37, 1817-1823(1999).
 - 123) Carbon coatings on carbon micro-coils by pyrolysis of methane and their properties, X. Chen, S. Motojima and H. Iwanaga, *Carbon*, 37, 1825-1831(1999).
 - 124) Growth of carbon micro-coils by pre-pyrolysis of propane, X. Chen and S. Motojima, *J. Mater. Sci.*, 34, 3581-3585(1999).
 - 125) Preparation and properties of cosmo-mimetic carbon micro-coils and ceramic micro-solenoids/micro-tubes by CVD process, S. Motojima, X. Chen, T. Kuzuya, W.-I. Hwang, M. Fujii and H. Iwanaga, *J. Phys. IV France* 9, Pr8-445~Pr-8-452(1999).
 - 126) Electrical properties of carbon micro coils, K. Kaneto, M. Tsuruta and S. Motojima, *Synthetic*

- Metals*, 103, 2578-2579(1999).
- 127) Morphologies of carbon micro-coils grown by chemical vapor deposition, X. Chen and S. Motojima, *J. Mater. Sci.*, 34, 5519-5524(1999).
 - 128) Preparation and properties of TiC micro-coils and micro-tubes by the vapour phase titanizing of carbon micro-coils, S. Motojima, S. Yang, X. Chen and H. Iwanaga, *J. Mater. Sci.*, 34, 5989-5994(1999).
 - 129) Three-dimensional vapor growth mechanism of carbon microcoils, X. Chen, T. Saito, M. Kusunoki and S. Motojima, *J. Mater. Res.*, 14(1), 4329-4336(1999).
 - 130) 気相合成されたカーボンマイクロコイルのモルフォロジー、藤井光広、大黒 貴、藤岡正見、元島栖二、岩永 浩、長崎総合科学大学紀要、40(1), 21-26(1999).
 - 131) SiCl₄-CH₄-H₂系原料を用いた化学気相蒸着法による炭化珪素の成膜条件、末光 毅、西尾光司、元島栖二、日本金属学会誌、63(7), 882-887(1999).
 - 132) 化学気相含浸によるセラミックスガスタービン部材の性能向上、末光 毅、西尾光司、井頭賢一郎、元島栖二、日本金属学会誌、63(8), 994-1001(1999).
 - 133) Preparation and properties of SiC micro-coils by the vapor phase siliconizing of carbon micro-coils, S. Motojima, S. Yang and X. Chen, *Mater. Res. Bull.*, 35, 203-209(2000).
 - 134) Effect of external electromagnetic field and bias voltage on the vapor growth, morphology and properties of carbon micro coils, W. In-Hwang, X. Chen, T. Kuzuya, K. Kawabe and S. Motojima, *Carbon*, 38, 565-571(2000).
 - 135) High-temperature heat treatment of carbon microcoils obtained by chemical vapor deposition process and their properties, X. Chen, W. In-Hwang, S. Shimada, M. Fujii, H. Iwanaga and S. Motojima, *J. Mater. Res.*, 15(3), 808-814(2000).
 - 136) Vapor growth of carbon micro-coils by the Ni catalyzed pyrolysis of acetylene using rotating substrate, W. In-Hwang, H. Yanagida and S. Motojima, *Mater. Lett.*, 43, 11-14(2000).
 - 137) Preparation of TiN microcoils and microtubes by titanizing/nitriding of carbon and TiC microcoils, S. Motojima, W. In-Hwang, X. Chen and H. Iwanaga, *J. Electrochem. Soc.*, 147(3), 1228-1234(2000).
 - 138) Vapor phase preparation of cosmo-mimetic carbon micro-coils and their properties, X. Chen, S. Motojima, W. In-Hwang, M. Kohda, Y. Hishikawa and H. Iwanaga, *Trans. Mater. Res. Soc. Jpn.*, 25(2), 565-568(2000).
 - 139) Vapor phase preparation of double helical carbon micro-coils using a multiple-gas-inlet- reactor, X. Chen, W.-In Hwang and S. Motojima, *Mater. Technol.*, 18(6), 229-237(2000).
 - 140) Vapor growth, morphology and some properties of carbon micro-coils by metal and metal oxide-catalyzed pyrolysis of acetylene, W. In- Hwang, X. Chen, M. Kohda and S. Motojima, *Mater. Technol.*, 18(7), 263-270(2000).
 - 141) Stability of oxygen-containing surface functional groups and ESR parameters of carbon microcoils, K. Shibagaki, S. Motojima and M. Hashimoto, *Mater. Technol.*, 18(10), 400-405(2000).
 - 142) Surface properties of carbon micro-coils oxidized by a low concentration of oxygen gas, K. Shibagaki and S. Motojima, *Carbon*, 38, 2087-2093(2000). (PDF)
 - 143) Si-Ti-C-O 繊維への気相蒸着法による熱分解炭素の成膜、末光 毅、西尾光司、元島栖二、日本金属学会誌、64(9), 781-786 (2000).
 - 144) Formation of C/SiC multilayer coatings on Si-Ti-C-O fiber, T. Suemitsu and S. Motojima, *Mater. Sci. Eng.*, B78, 119-124(2000).
 - 145) Preparation and properties of microcoils and microtubes of NbC/C/NbC ~ NbC by vapor phase metallizing of the regular carbon microcoils, S. Motojima, W. In-Hwang and X. Chen, *Mater. Res. Bull.*, 35, 1517-1524(2000).
 - 146) Cosmo-mimetic carbon micro-coils, S. Motojima, X. Chen, W. In-Hwang, T. Kuzuya, M. Kohda and Y. Hishikawa, *Electrochem. Soc. Proc.*, 2000-13, 379-384(2000).
 - 147) Morphology of carbon micro-coils grown by catalytic decomposition of hydrocarbons, X. Chen, Y. Hishikawa, W.-In Hwang, T. Kuzuya and S. Motojima, *Electrochem. Soc. Proc.*, 2000-13, 385-392(2000).
 - 148) Vapor phase preparation of carbon micro-coils/micro-tubes and graphite micro-coils/micro-tubes and their properties, S. Motojima, X. Chen, W.-In Hwang and Y. Hishikawa, *Proc. 1st Int. Conf. Carbon (2000, Berlin)*, P. 1035-36.
 - 149) A novel pattern of carbon micro-coils grown by chemical vapor deposition, X. Chen, Y. Hishikawa and S. Motojima, *Proc. 1st Int. Conf. Carbon (2000, Berlin)*, P. 1055-1056.

- 150) Micro-structure and some surface properties of micro-helix carbon fibers, X. Chen and S. Motojima, *Cailiao Dao Bao*, 14(9), 56-59(2000).
- 151) Thermal behavior and effect of heat treatment in an inert gas on oxidized carbon microcoils, K. Shibagaki and S. Motojima, *Carbon*, 39, 411-417(2001).
- 152) Surface microstructure and pore distribution of carbon microcoils, K. Shibagaki and S. Motojima, *Mater. Technol.*, 19(2), 38-43(2001).
- 153) Distribution of sulfur in bulk carbon microcoils, K. Shibagaki and S. motojima, *Carbon*, 39, 1605-1616(2001).
- 154) Outermost surface microstructure of as-grown, heat-treated and partially oxidized carbon microcoils, K. Shibagaki, S. Motojima Y. Umemoto and Y. Nishitani, *Carbon*, 39, 1337-1342(2001).
- 155) Effect of external electromagnetic field and bias voltage on the chemical vapor growth of the carbon micro-coils and their properties, W. In-Hwang, X. Chen, K. Kawabe and S. Motojima, *Mater. Sci. Eng.*, B86, 1-6 (2001).
- 156) Preparation and properties of TaC/C/TaC ~ TaC composite micro-tubes by vapor phase tantalizing of the regular carbon micro-coils/micro-tubes, S. Motojima, W. In-Hwang and H. Iwanaga, *J. Mater. Sci.*, 36, 673-677 (2001) .
- 157) Oxidation characteristics of the graphite micro-coils, and growth mechanism of the carbon coils, W. In-Hwang, T. Kuzuya, H. Iwanaga and S. Motojima, *J. Mater. Sci.*, 36, 971-978(2001).
- 158) カーボンマイクロコイル (CMC) の形態と微構造、 橋新 剛、岩永 浩、元島栖二、材料技術、19 (6)、293-298 (2001)
- 159) Preparation of carbon micro-coils involving the decomposition of hydrocarbons using PACT (Plasma and catalyst technology) reactor, C. Kuzuya, Y. Hayashi and S. Motojima, *Carbon*, 40, 1071-1077(2002).
- 160) Vapor phase preparation of super-elastic carbon micro-coils, X. Chen, S. Motojima and H. Iwanaga, *J. Cryst. Growth*, 237-239, 1931-1936(2002).
- 161) Preparation of carbon micro-coils by ultrasonic wave CVD, C. Kuzuya, Y. Hishikawa and S. Motojima, *J. Chem. Eng. Jpn.*, 35(2), 144-149(2002).
- 162) Preparation, morphology, and growth mechanism of carbon nanocoils, C. Kuzuya, W. In-Hwang, S. Hirako, Y. Hishikawa and S. Motojima, *Chem. Vap. Deposition*, 8(2), 57-62(2002).
- 163) Preparation of carbon microcoils with the application of an electromagnetic fields and reaction scheme, C. Kuzuya, S. Motojima, M. Kohda and Y. Hishikawa, *Mater. Technol.*, 20(1), 3-9(2002).
- 164) Preparation of carbon micro-coils with the application of outer and inner electromagnetic fields and bias voltage, C. Kuzuya, M. Kohda, Y. Hishikawa and S. Motojima, *Carbon*, 40, 1991-2001(2002).
- 165) Vapor phase preparation of carbon microcoils by applying ultrasonic waves, S. Motojima, C. Kuzuya, Y. Hishikawa and S. Shimada, *Trans. Mater. Res. Soc. Jpn.*, 27(1), 109-112(2002).
- 166) Vapor phase preparation of carbon microcoils/nanocoils using an electromagnetic field, Y. Hishikawa, C. Kuzuya, S. Hirako, W. In-Hwang and S. Motojima, *Trans. Mater. Res. Soc. Jpn.*, 27(1), 39-42(2002).
- 167) Study of microcoiled carbon fibers formed by pyrolysis with scanning electron microscope, S. Yang, X. Chen and S. Motojima, *J. Chinese Electron Microscopy Society*, 21(1), 66-68(2002).
- 168) Morphology and growth models of circular and flat carbon coils obtained by the catalytic pyrolysis of acetylene, X. Chen, S. Yang and S. Motojima, *Mater. Lett.*, 57, 48-54(2002).
- 169) Magnetoresistance in carbon micro-coils annealed at various temperatures, M. Fujii, M. Matsui, S. Motojima and Y. Hishikawa, *J. Cryst. Growth*, 237-239, 1937-1941(2002).
- 170) Magnetoresistance in carbon micro-coils obtained by chemical vapor deposition, M. Fujii, M. Matsui, S. Motojima and Y. Hishikawa, *Thin Solid Films*, 409, 78-81(2002). (PDF)
- 171) Coiling-chirality changes in carbon microcoils obtained by catalyzed pyrolysis of acetylene and its mechanism, S. Yang, X. Chen and S. Motojima, *Appl. Phys. Lett.*, 81(19), 3567-3569(2002).
- 172) Conformation and growth mechanism of the carbon nanocoils with twisting form in comparison with that of carbon microcoils, X. Chen, S. Yang, K. Takeuchi, T. Hashishin, H. Iwanaga and S. Motojima, *Diamond Relat. Mater.*, 12, 1836-1840(2003).
- 173) Tip morphology and growth mechanism of carbon micro-coils, S. Yang, X. Chen and S. Motojima, *Mater. Technol.*, 21(2), 73-79(2003).
- 174) Preparation of TaN/C(carbon microcoils)/TaN composite microtubes and TaN microtubes by

- vapor phase diffusion treatment of carbon microcoils, S. Yang, N. Ueshima and S. Motojima, *Mater. Sci. Eng.*, A 346, 29-33(2003).
- 175) Polymorphism in ZrP crystal, H. Iwanaga, T. Hashishin, S. Motojima, M. Ichihara and S. Takeuchi, *J. Mater. Res.*, 18(3), 1-4(2003).
- 176) Microcoiled carbon fibers formed by using Ni-Cu catalysts in CVD process, X. Chen, K. Takeuchi, S. Yang, Y. Hishikawa and S. Motojima, *Electrochem. Soc. Proc.*, 2003-08, 1190-1197(2003).
- 177) Vapor phase preparation of carbon microcoils and nanocoils under concerted amplification of high magnetic field and their properties, S. Motojima, K. Kuzuya, S. Yang, X. Chen, T. Hashishin, H. Iwanaga, S. Shimada, H. Saito, N. Yoshikawa, T. Awaji and K. Watanabe, *Electrochem. Soc. Proc.*, 2003-08, 1198-1205(2003).
- 178) Carbon micro/nanocoils produced by using WS₂ catalyst in CVD process, S. Yang, X. Chen and S. Motojima, *Electrochem. Soc. Proc.*, 2003-08, 1206-1211(2003).
- 179) Evaluation of induced electromotive force of a carbon micro coil, Y. Kato, N. Adachi, T. Okuda, T. Yoshida, S. Motojima and T. Tsuda, *Jpn. J. Appl. Phys.*, 42, 5035-5037(2003).
- 180) TiO₂/C composite microcoils and TiO₂ hollow microcoils with high photocatalytic activities and electromagnetic (EM) wave absorption abilities, S. Motojima, T. Suzuki, Y. Hishikawa and X. Chen, *Jpn. J. Appl. Phys.*, 42(8A), L938-L940(2003).
- 181) Preparation of TiO₂ microcoils from carbon microcoil templates using a sol-gel process, S. Motojima, T. Suzuki, Y. Noda, A. Hiraga, H. Iwanaga, T. Hashishin, Y. Hishikawa, S. Yang and X. Chen, *Chem. Phys. Lett.*, 378, 111-116(2003).
- 182) Electromagnetic wave absorption properties of carbon microcoils/PMMA composite beads in W bands, S. Motojima, S. Hoshiya and Y. Hishikawa, *Carbon*, 41, 2653-2689(2003).
- 183) Electromagnetic wave absorption property of carbon microcoils in 12-110 GHz region, S. Motojima, Y. Noda, S. Hoshiya and Y. Hishikawa, *J. Appl. Phys.*, 94(4), 2325-2330(2003).
- 184) Carbon nanocoils prepared by the catalytic pyrolysis of acetylene, S. Yang, X. Chen and S. Motojima, *Trans. Mater. Res. Soc. JP.*, 28(4), 1219-1222(2003).
- 185) Preparation and properties of carbon nanocoils by the catalytic pyrolysis of acetylene, S. Motojima, X. Chen, S. Yang, S. Shimada, T. Hashishin and H. Iwanaga, *Trans. Mater. Res. Soc. JP.*, 28(4), 1239-1242(2003).
- 186) Preparation of helical TiO₂/CMC microtubes and pure helical TiO₂ microtubes, S. Motojima, T. Suzuki, Y. Noda, A. Hiraga, S. Yang, X. Chen, H. Iwanaga, T. Hashishin and Y. Hishikawa, *J. Mater. Sci.*, 39, 2663-2674(2004).
- 187) Syntheses and morphologies of the carbon microsolenoid composites and double negative microcoils, S. Yang, X. Chen and S. Motojima, *Chem. Vap. Deposition*, 10(2), 97-102(2004).
- 188) Carbon nanocoils with changed coiling-chirality formed over Ni/molecular sieves catalyst, X. Chen, S. Yang and S. Motojima, *J. Mater. Sci.*, 39, 3227-3233(2004).
- 189) Morphology of zigzag carbon nanofibers prepared by catalytic pyrolysis of acetylene using Fe-group containing alloy catalysts, S. Yang, X. Chen and S. Motojima, *Diamond Relat. Mater.*, 13, 85-92(2004).
- 190) Vapor-phase formation of sing-helix carbon microcoils by using WS₂ catalyst and the morphologies, S. Yang, X. Chen and S. Motojima, *J. Mater. Sci.*, 39, 2727-2736(2004).
- 191) The phenomenon of changing coiling-chirality in carbon nanocoils obtained by catalytic pyrolysis of acetylene with various catalysts, S. Yang, X. Chen, S. Motojima and H. Iwanaga, *J. Nanosci. Nanotechn.*, 4(1/2), 167-175(2004).
- 192) Microstructure of carbon coils, T. Hashishin, H. Iwanaga, Y. Furuya, S. Motojima and Y. Hishikawa, *Trans. Mater. Res. Soc. JP.*, 29(2), 449-452(2004).
- 193) Electric and mechanical properties of carbon coils, T. Hashishin, H. Iwanaga, S. Motojima and Y. Hishikawa, *Trans. Mater. Res. Soc. JP.*, 29(2), 453-456(2004).
- 194) Preparation and properties of super-elastic carbon microcoils by Ni-catalyzed CVD, S. Yang, H. Aoki, X. Chen and S. Motojima, *Trans. Mater. Res. Soc. JP.*, 29(2), 457-460(2004).
- 195) Electromagnetic wave absorption properties of carbon microcoils/nanocoils, S. Motojima, D. Nagahara, T. Kuzuya and Y. Hishikawa, *Trans. Mater. Res. Soc. JP.*, 29(2), 461-464(2004).
- 196) Preparation of ceramics/carbon microcoils composites using carbon microcoils as a template, S. Motojima, T. Muraki, T. Suzuki, S. Yang, X. Chen, T. Hashishin, H. Iwanaga and Y. Hishikawa, *Trans. Mater. Res. Soc. JP.*, 29(2), 465-468(2004).
- 197) Structure of carbon coils observed by neutron diffraction, T. Fukunaga, K. Itou, T. Kuzuya, Y.

- Hishikawa and S. Motojima, *Trans. Mater. Res. Soc. JP.*, 29(2), 469-472(2004).
- 198) Cosmo-mimetic helical/spiral materials and their potential applications, S. Motojima, X. Chen, S. Yang, H. Iwanaga, Y. Hayashi, T. Kuzuya and Y. Hishikawa, *Trans. Mater. Res. Soc. JP.*, 29(2), 477-480(2004).
- 199) Morphologies, microstructure and growth mechanism of carbon nanocoils over stainless steel catalysts, S. Yang, X. Chen, T. Hashishin, H. Iwanaga and S. Motojima, *Trans. Mater. Res. Soc. JP.*, 29(2), 481-484(2004).
- 200) Preparation and morphologies of elastic carbon microcoils/nanocoils by various catalysts, S. Yang, X. Chen and S. Motojima, *Trans. Mater. Res. Soc. JP.*, 29(2), 485-488(2004).
- 201) Preparation of carbon microcoils/nanocoils and their morphologies, S. Motojima, S. Yang, X. Chen, T. Muraki, K. Takeuchi and H. Iwanaga, *Trans. Mater. Res. Soc. JP.*, 29(2), 489-492(2004).
- 202) Hydrogen absorption of carbon micro coils, Y. Furuya, K. Himeshima, Y. Inoue, S. Izumi, T. Hashishin, H. Iwanaga, S. Motojima and Y. Hishikawa, *Trans. Mater. Res. Soc. JP.*, 29(2), 493-496(2004).
- 203) Effect of mechanical milling on hydrogen absorption behavior of carbon micro coils, Y. Furuya, S. Izumi, M. Saikawa, K. Himeshima, T. Hashishin, H. Iwanaga, S. Motojima and Y. Hishikawa, *Trans. Mater. Res. Soc. JP.*, 29(2), 497-500(2004).
- 204) Carbon nanohelical coils and nanotubes preparation using metal clusters synthesized by plasma-gas-condensation, T. Hihara, S. Hirako, S. Motojima, Y. Yamamoto, T. Mizuno, M. Tanemura and K. Sumiyama, *Trans. Mater. Res. Soc. JP.*, 29(2), 505-507(2004).
- 205) Vapor phase preparation of carbon nanocoils by noble metal catalysts, S. Motojima, S. Hirako, T. Kuzuya and X. Chen, *Trans. Mater. Res. Soc. JP.*, 29(2), 519-522(2004).
- 206) Interaction of hydrogen with carbon coils at low temperature, Y. Furuya, T. Hashishin, H. Iwanaga, S. Motojima and Y. Hishikawa, *Carbon*, 42, 331-335(2004).
- 207) Nanohelical/spiral materials, S. Motojima and X. Chen, *Encyclopedia of Nanosci. and Nanotech.*, Ed. by H. S. Nalwa (American Science Publisher), 6, 775-794(2004).
- 208) カーボンマイクロコイルの表面改質と溶媒への分散性、好野 則夫、小高 一義、近藤 行成、星屋 佐知子、元島 栖二、*Mater. Technol.*, 22(2), 50-56(2004).
- 209) Conformations of super-elastic carbon micro/nano-springs and their properties, S. Yang, X. Chen, M. Hasegawa and S. Motojima, *The 2004 International Conference on MEMS, NANO, and Smart Systems, 25 – 27 August 2004, Banff, Alberta-Canada*, 32-35(2004).
- 210) Novel tactile sensors manufactured by carbon microcoils, X. Chen, S. Yang, M. Hasegawa, and K. Takeuchi, S. Motojima, *The 2004 International Conference on MEMS, NANO, and Smart Systems, 25 – 27 August 2004, Banff, Alberta-Canada*, 486-490(2004).
- 211) Morphology of the growth tips of carbon microcoils/nanocoils, S. Yang, X. Chen and S. Motojima, *Diamond and Related Materials*, 13, 2152-2155(2004).
- 212) Properties and potential applications of carbon microcoils/nanocoils, S. Motojima, X. Chen, S. Yang and M. Hasegawa, *Diamond and Related Materials*, 13, 1989-1992(2004).
- 213) Vapor phase preparation and properties of NbN/C(carbon coils)/NbN~NbN micro-coils/micro-tubes, S. Motojima and N. Ueshima, *J. Alloy Compd.*, 393, 307-310 (2005).
- 214) Morphology and microstructure of spring-like carbon micro-coils/nano-coils prepared by catalytic pyrolysis of acetylene using Fe-containing alloy catalysts, S. Yang, X. Chen, S. Motojima and M. Ichihara, *Carbon*, 43, 827-834(2005).
- 215) Microstructure and microscopic deposition mechanism of twist-shaped carbon nanocoils based on the observation of helical nanoparticles on the growth tips, S. Yang, X. Chen, M. Kusunoki, K. Yamamoto, H. Iwanaga and S. Motojima, *Carbon*, 43, 916-922(2005).
- 216) Vapor phase growth of microcoils/nanocoils, S. Yang, X. Chen and S. Motojima, *J. Metastable and Nanocrystalline Mater.*, 23, 387-390(2005).
- 217) Tactile microsensors prepared from arrayed superelastic carbon microcoils, X. Chen, S. Yang, M. Hasegawa, K. Kawabe and S. Motojima, *Appl. Phys. Lett.*, 87(5), 054101-1~3(2005).
- 218) Electrical resistivity of carbon micro coil measured by a multi-probe unit installed in a scanning electron microscope, Y. Kajihara, T. Hihara, K. Sumiyama and S. Motojima, *Jpn. J. Appl. Phys.*, 44(9A), 6867-6869 (2005).
- 219) Biomimetic tactile sensors of CMC/polysilicone composite sheet as artificial skins, S. Yang, N. Matushita, A. Shimizu, X. Chen and S. Motojima, *Proceedings of the 2005 IEEE, International Conference on Robotics and Biomimetics, Hong Kong and Macau*, 41-44(June 29-July 3, 2005).

- 220) Preparation and property of novel CMC tactile sensors, C, Xiuqin, Y, Shaoming and Motojima, Seiji, *NSTI Nanotech 2005, NSTI Nanotechnology Conference and Trade Show, Anaheim, CA, United States*, 2, 289-292(May 8-12, 2005).
- 221) Artificial skin-biomimetic micro-tactile sensors prepared by carbon microcoils/nanocoils(CMC), X. Chen, S. Yang and S.Motojima, *Asian BioCeramic Symposium 2005(Sapporo, Japan), Archives of BioCeramics Reseach*, 5, 190-193(2005).
- 222) Biomimetic micro-tactile sensors using double-helix carbon microcoils and single-helix carbon microcoils, S. Yang, X. Chen, T. Katsuno and S.Motojima, *Asian BioCeramic Symposium 2005(Sapporo, Japan), Archives of BioCeramics Reseach*, 5, 194-197(2005).
- 223) The influence of ceramic supporter on the catalyzed chemical vapor deposition of carbon microcoils/nanocoils, X. Chen, S. Yang, T. Katsuno and S.Motojima, *the 22nd International Japan-Korea Seminar on Ceramics, Nagoya, Japan*, 257-260(November 24-26, 2005).
- 224) Tactile sensing properties of carbon micro coils(CMCs)/polysilicone composite sheets, T. Katsuno, X. Chen, S. Yang and S.Motojima, *the 22nd International Japan-Korea Seminar on Ceramics, Nagoya, Japan*, 559-562(November 24-26, 2005).
- 225) Morphology and microstructure of twisting nano-ribbons prepared using sputter-coated Fe-base alloy catalysts on glass substrates, X. Chen, S. Yang, S. Motojima and M. Ichihara, *Mater. Lett.*, 59(7), 854-858(2005).
- 226) Electric and dielectric properties of carbon microcoils(CMC)/polysilicone composite sheets, M. Nessa and S. Motojima, *Mater. Technol.*, 24(2), 95-103(2006).
- 227) Expanding and contracting motions of carbon micro-coils induced by alternating current, Y. Kato, T. Kojima, H. Miwa, T. Tsuda, T. Yoshida and S. Motojima, *J. J. Apply. Phys.*, 45(4A), 2695-2698(2006).
- 228) Morphology and growth mechanism of single-helical spring-like carbon nanocoils with laces prepared using Ni/molecular sieve(Fe)catalyst, X. Chen, S.Yang, K. Takeuchi and S. Motojima, *J. Mater. Sci.*, 41(8), 2351-2357(2006).
- 229) Various conformation of carbon nanocoils prepared by supported Ni-Fe/molecular sieve catalyst, X. Chen, S. Yang, K. Takeuchi and S. Motojima, *J. Nanoscience and Nanotechnology*, 6(1), 141-145(2006).
- 230) Electron holographic observation of micro-magnetic fields current-generated from single carbon coil, Kazuo Yamamoto, Tsukasa Hirayama, Michiko Kusunoki, Shaoming Yang and Seiji Motojima, *Ultramicroscopy*, 106(4-5), 314-319.
- 231) Observation and analysis of percolation behavior in carbon microcoils/polysilicone-rubber composite sheets, T. Katsuno, X. Chen, S. Yang, S. Motojima, M. Homma, T. Maeno and M. Konyo, *Appl. Phys. Lett.*, 88(23), 232115-1~3(2006).
- 232) Electromechanical conversion mechanism of a tactile sensor using carbon micro coil inside an elastic material, M. Hommma, H. Morita, T. Maeno, M. Konyo and S. Motojima, *J. Robotics & Mechatronics*, 18(3), 235-241(2006).
- 233) Preparation of carbon microcoils (CMCs) using a wire CVD process, S. Motojima, X. Chen, H. Maekawa, S. Yang and C. Kuzuya, *Mater. Technol.*, 24(3), 161-168(2006).
- 234) Tactile micro-sensor elements prepared from aligned super-elastic carbon microcoils (SE-CMC) and polysilicone matrix, S. Yang, X. Chen, H. Aoki and S. Motojima, *Smart Mater. and Structures*, 15, 687-694 (2006).
- 235) Effectness of carbon microcoils as reinforcing materials for a polymer matrix, K. Yoshimura, K. Nakano, T. Miyake, Y. Hishikawa and S. Motojima, *Carbon*, 44, 2833-2838(2006).
- 236) Biomimetic Tactile Sensors with Knot-type or Fingerprint-Type Surface Made of Carbon Microcoils/Polysilicone, Seiji Motojima, Xiuqin Chen, Juri Sakai and Shaoming Yang, *Jpn. J. Appl. Phys.*, Pt2, 45(37), L1019-L1021(2006).
- 237) Preparation and electrical properties of carbon microcoils for the tactile sensor, T. Katsuno, X. Chen, S. Yang and S. Motojima, *Trans. Mater. Res. Soc. Jp.*, 31(3), 697-700(2006).
- 238) The influences of some physical conditions on the sensory properties of tactile sensor element sheets made from carbon microcoils (CMCs)/polymer composite, Xiuqin Chen, Shaoming Yang, Juri Sakai, Naoki Matsushita, Ami Shimizu and Seiji Motojima, *Mater. Technol.* 24(4), 238-247 (2006).
- 239) Tactile sensing properties of protein-like single-helix carbon microcoils, S. Yang X. Chen and S. Motojima, *Carbo*, 44, 3352-3355(2006).

- 240) Preparation and dynamic sensing properties of elastic CMC tactile sensors with various surface morphologies, X. Chen, S. Yang, J. Sakai, M. Hasegawa, A. Shimizu and S. Motojima, *Mater. Technol.*, 24(5), 297-307(2006).
- 241) Grafting of polymers onto carbon microcoil surface by ligand-exchange reaction of ferrocene moieties of polymer with polycondensed aromatic ligands of the surface, H. Morihashi, Y. Nishida, Y. Takahashi, K. Fujiki, T. Yamauchi, N. Tsubokawa and S. Motojima, *Polymer J.*, 39, 175-180(2007).
- 242) Grafting of polymers onto carbon microcoil surface by use of carboxyl groups on the surface and electric properties of conductive composites prepared from silicone rubber with the polymer-grafted carbon microcoil, H. Morihashi, Y. Takahashi, Y. Nishida, K. Fujiki, T. Yamauchi, N. Tsubokawa and S. Motojima, *Polymer J.*, 39, 404-410(2007).
- 243) Influence of CVD conditions on the growth of carbon microcoils with circular cross-sections, X. Chen, S. Yang, Y. Kato and S. Motojima, *Mater Lett.*, 61(14-15), 2900-2903(2007).
- 244) Synthesis and morphology of carbon microcoils produced using methane as a carbon source, S. Yang, M. Hasegawa, X. Chen and S. Motojima, *Carbon*, 45(7), 1592-1595(2007).
- 245) Effect of compressive and tensile strains on the electrical resistivity of carbon microcoil/silicone-rubber composites, K. Yoshimura, K. Nakano, T. Miyake, Y. Hishikawa, C. Kuzuya, T. Katsuno, S. Motojima, *Carbon*, 45(10), 1997-2003(2007).
- 246) Novel tactile/proximity sensors made of vapor grown carbon microcoils(CMCs), X. Chen, S. Yang, H. Natuhara, T. Sekine and S. Motojima, *IEEE, The Second International Conference on Sensing Technology*, 446-449 (2007/11/26-28, New Zealand).
- 247) Application of CMC sensors in medical robotics autonomous system, X. Chen, S. Yang, H. Natuhara, K. Kawabe, T. Takemitsu and S. Motojima, *IEEE, The Fourth International Conference on Computational Intelligence, Robotics and Autonomous Systems*, 132-136 (2007/11/28-30, New Zealand) .
- 248) Preparation of carbon microcoils by catalytic methane hot-wire CVD process, X. Chen, M. Hasegawa, S. Yang, Y. Nitta, T. Katsuno and S. Motojima, *Thin Solid Films*, 516(5), 714-717(2008).
- 249) Preparation of single-helix carbon microcoils by catalytic CVD process, S. Yang, I. Ozeki, X. Chen, T. Katsuno and S. Motojima, *Thin Solid Films*, 516(5), 718-721(2008).
- 250) Catalytic effects of various metal carbides and Ti compounds for the growth of carbon nanocoils (CNCs), S. Yang, X. Chen, N. Kikuchi and S. Motojima, *Materials Letters*, 62(10-11), 1462-1465(2008).
- 251) High performance of the tactile sensor elements using spring-shaped single helix carbon microcoils grown over Fe-Ni catalysts as a sensing materials. X. Chen, S. Yang, I. Ozeki, S. Motojima, H. Sakai and M. Abe, *Mater. Technol.*, 28(2), 37-44(2010).
- 252) The Influence of Fe contained catalysts on the growth of single-helix carbon microcoils, S. Yang, X. Chen, I. Ozeki, S. Motojima, H. Sakai and M. Abe, *Mater. Technol.*, 28(4), 161-167(2010).
- 253) Surface functionalization of carbon microcoils and their selective immobilization on surface-modified silicon substrate, P.D. Adhikari, Y. Tai, M. Ujihara, C-C Chu, T. Imae and S. Motojima,
- 254) 2) Mechanical and electrical studies of PVA films embedded CMC/PVA hybrid, P.D. Adhikari, M. Ujihara, T. Imae Po-Da Hong and S. Motojima,