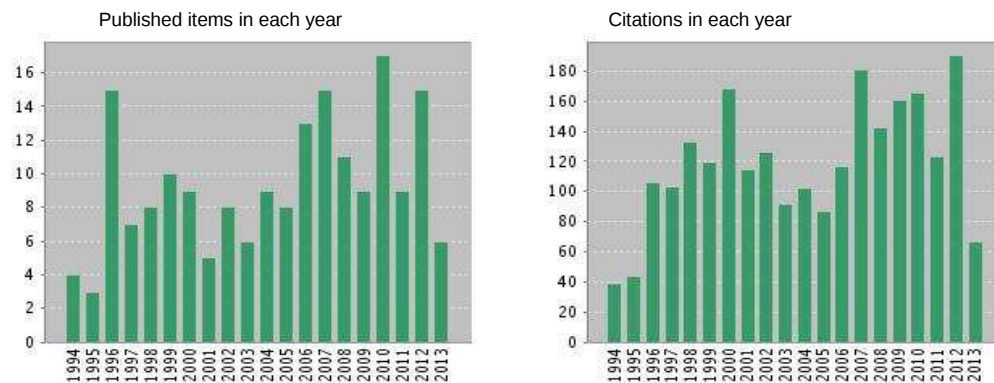


Number of papers: 212
 Number of citations: 2499
 h-index: 27



Paper list with more than 10 citations

Number of citations	Title	Authors	Journal	Year	Volume	Page
86	TIME-MODULATED ELECTRON-CYCLOTRON-RESONANCE PLASMA DISCHARGE FOR CONTROLLING GENERATION OF REACTIVE SPECIES	SAMUKAWA, S; FURUOYA, S	Appl. Phys. Lett.	1993	63	2044
83	HIGHLY SELECTIVE AND HIGHLY ANISOTROPIC SiO ₂ ETCHING IN PULSE-TIME MODULATED ELECTRON-CYCLOTRON-RESONANCE PLASMA	SAMUKAWA, S	Jpn. J. Appl. Phys.	1994	33	2133
82	Pulse-time modulated plasma discharge for highly selective, highly anisotropic and charge-free etching	Samukawa, S; Mieno, T	Plasma Sources Sci. Technol.	1996	5	132
81	Generating high-efficiency neutral beams by using negative ions in an inductively coupled plasma source	Samukawa, S; Sakamoto, K; Ichiki, K	J. Vac. Sci. Technol. A	2002	20	1566
78	Pulse-time-modulated electron cyclotron resonance plasma discharge for highly selective, highly anisotropic, and charge-free etching	Samukawa, S; Ohtake, H; Mieno, T	J. Vac. Sci. Technol. A	1996	14	3049
70	Ultrahigh frequency versus inductively coupled chlorine plasmas: Comparisons of Cl and Cl-2 concentrations and electron temperatures measured by trace rare gases optical emission spectroscopy	Malyshev, MV; Donnelly, VM; Samukawa, S	J. Appl. Phys.	1998	84	1222
60	New ultra-high-frequency plasma source for large-scale etching processes	Samukawa, S; Nakagawa, Y; Tsukada, T; Ueyama, H; Shinohara, K	Jpn. J. Appl. Phys.	1995	34	6805
58	PULSE-TIME-MODULATED ELECTRON-CYCLOTRON-RESONANCE PLASMA-ETCHING FOR HIGHLY SELECTIVE, HIGHLY ANISOTROPIC, AND NOTCH-FREE POLYCRYSTALLINE SILICON PATTERNING	SAMUKAWA, SJ	Appl. Phys. Lett.	1994	64	3398
53	Dynamics of pulsed-power chlorine plasmas	Malyshev, MV; Donnelly, VM; Colonell, JI; Samukawa, S	J. Appl. Phys.	1999	86	4813
50	Pulse-time-modulated electron cyclotron resonance plasma etching with low radio-frequency substrate bias	Samukawa, S	Appl. Phys. Lett.	1996	68	316
50	PULSE-TIME MODULATED ELECTRON-CYCLOTRON-RESONANCE PLASMA-ETCHING FOR HIGHLY SELECTIVE, HIGHLY ANISOTROPIC, AND LESS-CHARGING POLYCRYSTALLINE SILICON PATTERNING	SAMUKAWA, S; TERADA, K	J. Vac. Sci. Technol. B	1994	12	3300
44	EXTREMELY HIGH-SELECTIVE ELECTRON-CYCLOTRON RESONANCE PLASMA-ETCHING FOR PHOSPHORUS-DOPED POLYCRYSTALLINE SILICON	SAMUKAWA, S; SUZUKI, Y; SASAKI, M	Appl. Phys. Lett.	1990	57	403
43	High-efficiency neutral-beam generation by combination of inductively coupled plasma and parallel plate DC bias	Samukawa, S; Sakamoto, K; Ichiki, K	Jpn. J. Appl. Phys.	2001	40	L779
41	New radical control method for high-performance dielectric etching with nonperfluorocompound gas chemistries in ultrahigh-frequency plasma	Samukawa, S; Mukai, T; Tsuda, K	J. Vac. Sci. Technol. A	1999	17	2551
38	50 nm gate electrode patterning using a neutral-beam etching system	Noda, S; Nishimori, H; Ida, T; Arikado, T; Ichiki, K; Ozaki, T; Samukawa, S	J. Vac. Sci. Technol. A	2004	22	1506
37	LOW-TEMPERATURE, UNIFORM, AND HIGH-DENSITY PLASMA PRODUCED BY A NEW ULTRA-HIGH-FREQUENCY DISCHARGE WITH A SPOKEWISE ANTENNA	SAMUKAWA, S; NAKAGAWA, Y; TSUKADA, T; UEYAMA, H; SHINOHARA, K	Appl. Phys. Lett.	1995	67	1414
36	High-efficiency low energy neutral beam generation using negative ions in pulsed plasma	Samukawa, S; Sakamoto, K; Ichiki, K	Jpn. J. Appl. Phys.	2001	40	L997
34	Ultimate top-down etching processes for future nanoscale devices: Advanced neutral-beam etching	Samukawa, S	Jpn. J. Appl. Phys.	2006	45	2395
33	A 7-nm nanocolumn structure fabricated by using a ferritin iron-core mask and low-energy Cl neutral beams	Kubota, T; Baba, T; Samukawa, S; Kawashima, H; Uraoka, Y; Fuyuki, T; Yamashita, I	Appl. Phys. Lett.	2004	84	1555
32	Differences in radical generation due to chemical bonding of gas molecules in a high-density fluorocarbon plasma: Effects of the C = C bond in fluorocarbon gases	Samukawa, S; Mukai, T	J. Vac. Sci. Technol. A	1999	17	2463
32	EXTREMELY HIGH SELECTIVE, HIGHLY ANISOTROPIC, AND HIGH-RATE ELECTRON-CYCLOTRON RESONANCE PLASMA-ETCHING FOR N+ POLY-Si AT THE ELECTRON-CYCLOTRON RESONANCE POSITION	SAMUKAWA, S; SASAKI, M; SUZUKI, Y	J. Vac. Sci. Technol. B	1990	8	1192
30	TIME-MODULATED ELECTRON-CYCLOTRON-RESONANCE PLASMA DISCHARGE FOR CONTROLLING THE POLYMERIZATION IN SiO ₂ ETCHING	SAMUKAWA, S	Jpn. J. Appl. Phys.	1993	32	6080
30	DAMAGE CAUSED BY STORED CHARGE DURING ECR PLASMA-ETCHING	SAMUKAWA, S	Jpn. J. Appl. Phys.	1990	29	980
29	On-wafer monitoring of vacuum-ultraviolet radiation damage in high-density plasma processes	Samukawa, S; Ishikawa, Y; Kumagai, S; Okigawa, N	Jpn. J. Appl. Phys.	2001	40	L1346
28	High-performance silicon dioxide etching for less than 0.1-μm-high-aspect contact holes	Samukawa, S; Mukai, T	J. Vac. Sci. Technol. B	2000	18	166
28	ION CURRENT-DENSITY AND ITS UNIFORMITY AT THE ELECTRON-CYCLOTRON RESONANCE POSITION IN ELECTRON-CYCLOTRON RESONANCE PLASMA	SAMUKAWA, S; MORI, S; SASAKI, M	J. Vac. Sci. Technol. A	1991	9	85

27	Effects of Ar dilution on the optical emission spectra of fluorocarbon ultrahigh-frequency plasmas: C4F8VSCF4	Nakano, T; Samukawa, S	J. Vac. Sci. Technol. A	1999	17	686
27	TIME-VARIATION OF PLASMA PROPERTIES IN A PULSE-TIME-MODULATED ELECTRON-CYCLOTRON-RESONANCE DISCHARGE OF CHLORINE GAS	MIENO, T; SAMUKAWA, S	Jpn. J. Appl. Phys.	1995	34	L1079
27	DEPENDENCE OF ECR PLASMA-ETCHING CHARACTERISTICS ON SUB-MAGNETIC-FIELD AND SUBSTRATE POSITION	SAMUKAWA, S; MORI, S; SASAKI, M	Jpn. J. Appl. Phys.	1990	29	792
25	Charge-free etching process using positive and negative ions in pulse-time modulated electron cyclotron resonance plasma with low-frequency bias	Ohtake, H; Samukawa, S	Appl. Phys. Lett.	1996	68	2416
24	New ultrahigh-frequency plasma discharge for overcoming the limitations of etching processes	Samukawa, S; Nakano, T	J. Vac. Sci. Technol. A	1996	14	1002
22	Simulation of a pulse time-modulated bulk plasma in Cl-2	Yokozawa, A; Ohtake, H; Samukawa, S	Jpn. J. Appl. Phys.	1996	35	2433
21	Plasma-radiation-induced interface states in metal-nitride-oxide-silicon structure of charge-coupled device image sensor and their reduction using pulse-time-modulated plasma	Okigawa, M; Ishikawa, Y; Samukawa, S	Jpn. J. Appl. Phys.	2003	42	2444
21	Estimation of dissociation degree of N-2 in an inductively coupled plasma by vacuum ultraviolet emission spectroscopy	Nakano, T; Kumagai, S; Samukawa, S	J. Appl. Phys.	2002	92	2990
21	Effects of electron temperature in high-density Cl-2 plasma for precise etching processes	Samukawa, S; Tsukada, T	Appl. Phys. Lett.	1996	69	1056
20	POLYMERIZATION FOR HIGHLY SELECTIVE SiO2 PLASMA-ETCHING	SAMUKAWA, S; FURUOYA, S	Jpn. J. Appl. Phys.	1993	32	L1289
19	Highly selective low-damage processes using advanced neutral beams for porous low-k films	Ohtake, H; Inoue, N; Ozaki, T; Samukawa, S; Soda, B; Inukai, K	J. Vac. Sci. Technol. B	2005	23	210
19	Reduction of ultraviolet-radiation damage in SiO2 using pulse-time-modulated plasma and its application to charge coupled 44 device image sensor processes	Okigawa, M; Ishikawa, Y; Samukawa, S	J. Vac. Sci. Technol. B	2003	21	2448
19	Reduction of plasma induced damage in an inductively coupled plasma using pulsed source power	Samukawa, S; Noguchi, K; Colonell, JI; Bogart, KHA; Malyshev, MV; Donnelly, VM	J. Vac. Sci. Technol. B	2000	18	834
19	Effects of rare gas dilution for control of dissociation, ionization, and radical density in fluorocarbon ultrahigh-frequency plasmas	Samukawa, S; Nakano, T	J. Vac. Sci. Technol. A	1999	17	500
19	WAVE-PROPAGATION AND PLASMA UNIFORMITY IN AN ELECTRON-CYCLOTRON-RESONANCE PLASMA	SAMUKAWA, S	J. Vac. Sci. Technol. A	1993	11	2572
18	Surface reactions during etching of organic low-k films by plasmas of N-2 and H-2	Ishikawa, K; Yamaoka, Y; Nakamura, M; Yamazaki, Y; Yamasaki, S; Ishikawa, Y; Samukawa, S	J. Appl. Phys.	2006	99	
18	VUV and low energy electron impact study of electronic state spectroscopy of CF3I	Mason, NJ; Limao-Vieira, P; Eden, S; Kendall, P; Pathak, S; Dawes, A; Tennyson, J; Tegeder, P; Kitajima, M; Okamoto, M; Sunohara, K; Tanaka, H; Cho, H; Samukawa, S; Hoffmann, SV; Newnham, D; Spyrou, SM	International J. Mass Spectrometry	2003	223	647
17	Damage mechanism in low-dielectric (low-k) films during plasma processes	Jinnai, Butsurin; Nozawa, Toshihisa; Samukawa, Seiji	J. Vac. Sci. Technol. B	2008	26	1926
17	Effects of low-molecular-weight radicals for reduction of microloading in high-aspect contact-hole etching	Samukawa, S; Mukai, T	Thin Solid Films	2000	374	235
17	Plasma diagnostics and low-temperature deposition of microcrystalline silicon films in ultrahigh-frequency silane plasma	Sumiya, S; Mizutani, Y; Yoshida, R; Hori, M; Goto, T; Ito, M; Tsukada, T; Samukawa, S	J. Appl. Phys.	2000	88	576
16	Ion and neutral temperatures in a novel ultrahigh-frequency discharge plasma	Nakano, T; Ohtake, H; Samukawa, S	Jpn. J. Appl. Phys.	1996	35	L338
16	Accurate nano-EB lithography for 40-nm gate MOSFETs	Ochiai, Y; Manako, S; Samukawa, S; Takeuchi, K; Yamamoto, T	Microelectron. Eng.	1996	30	415
16	DEPENDENCE OF ELECTRON-CYCLOTRON RESONANCE PLASMA CHARACTERISTICS ON MAGNETIC-FIELD PROFILES	SAMUKAWA, S; NAKAMURA, T	Jpn. J. Appl. Phys.	1991	30	3147
16	DEPENDENCE OF GATE OXIDE BREAKDOWN FREQUENCY ON ION CURRENT-DENSITY DISTRIBUTIONS DURING ELECTRON-CYCLOTRON RESONANCE PLASMA-ETCHING	SAMUKAWA, S	Jpn. J. Appl. Phys.	1991	30	L1902
16	ION CURRENT-DENSITY AND ION ENERGY-DISTRIBUTIONS AT THE ELECTRON-CYCLOTRON RESONANCE POSITION IN THE ELECTRON-CYCLOTRON RESONANCE PLASMA	SAMUKAWA, S; NAKAGAWA, Y; IKEDA, K	Jpn. J. Appl. Phys.	1991	30	423
15	Charging and Coulomb staircase effects in silicon nanodisk structures fabricated by defect-free Cl neutral beam etching process	Kubota, Tomohiro; Hashimoto, Takeshi; Ishikawa, Yasushi; Samukawa, Seiji; Miura, Atsushi; Uraoka, Yukiharu; Fuyuki, Takashi; Takeguchi, Masaki; Nishioka, Kensuke; Yamashita, Ichiro	Appl. Phys. Lett.	2006	89	
15	Control of nitrogen depth profile in ultrathin oxynitride films formed by pulse-time-modulated nitrogen beams	Samukawa, S; Minemura, Y; Fukuda, S	J. Vac. Sci. Technol. A	2004	22	245
15	Highly crystalline 5H-polytype of sp(3)-bonded boron nitride prepared by plasma-packets-assisted pulsed-laser deposition: An ultraviolet light emitter at 225 nm	Komatsu, S; Kurashima, K; Kanda, H; Okada, K; Mitomo, M; Moriyoshi, Y; Shimizu, Y; Shiratani, M; Nakano, T; Samukawa, S	Appl. Phys. Lett.	2002	81	4547
15	New gas chemistries for high-performance and chargeless dielectric etching	Samukawa, S; Mukai, T; Noguchi, K	Mater. Sci. Semiconductor Processing	1999	2	203
15	Generation and extinction characteristics of negative ions in pulse-time-modulated electron cyclotron resonance chlorine plasma	Mieno, T; Samukawa, S	Plasma Sources Sci. Technol.	1997	6	398
14	Low-energy electron impact elastic and inelastic scattering from CF(3)I	Kitajima, M; Okamoto, M; Sunohara, K; Tanaka, H; Cho, H; Samukawa, S; Eden, S; Mason, NJ	J. Phys. B	2002	35	3257
14	OPTIMALLY STABLE ELECTRON-CYCLOTRON RESONANCE PLASMA GENERATION AND ESSENTIAL POINTS FOR COMPACT PLASMA SOURCE	SAMUKAWA, S; NAKAMURA, T; ISHIDA, T; ISHITANI, A	Jpn. J. Appl. Phys.	1992	31	4348
13	The 2012 Plasma Roadmap	Samukawa, Seiji; Hori, Masaru; Rauf, Shahid; Tachibana, Kunihide; Bruggeman, Peter; Kroesen, Gerrit; Whitehead, J. Christopher; Murphy, Anthony B.; Gutsol, Alexander F.; Starikovskaia, Svetlana; Kortshagen, Uwe; Boeuf, Jean-Pierre; Sommerer, Timothy J.; Kushner, Mark J.; Czarnetzki, Uwe; Mason, Nigel	J. Phys. D: Appl Phys.	2012	45	

13	Reduction effect of line edge roughness on time-dependent dielectric breakdown lifetime of Cu/low-k interconnects by using CF(3)I etching	Soda, Eiichi; Oda, Noriaki; Ito, Sanae; Kondo, Seiichi; Saito, Shuichi; Samukawa, Seiji	J. Vac. Sci. Technol. B	2009	27	649
13	Mitigation of accumulated electric charge by deposited fluorocarbon film during SiO ₂ etching	Shimmura, T; Suzuki, Y; Soda, S; Samukawa, S; Koyanagi, M; Hane, K	J. Vac. Sci. Technol. A	2004	22	433
13	Dependence of electron energy distributions on discharge pressure in ultrahigh-frequency and inductive-coupled Cl-2 plasmas	Samukawa, S; Tsukada, T	Jpn. J. Appl. Phys.	1997	36	7646
13	Dependence of frequency and pressure on electron energy distribution functions in low pressure plasma	Akashi, H; Samukawa, S; Takahashi, N; Sasaki, T	Jpn. J. Appl. Phys.	1997	36	L877
12	Mechanism for low-etching resistance and surface roughness of ArF photoresist during plasma irradiation	Jinnai, Butsurin; Koyama, Koji; Kato, Keisuke; Yasuda, Atsushi; Momose, Hikaru; Samukawa, Seiji	J. Appl. Phys.	2009	105	
12	A new silicon quantum-well structure with controlled diameter and thickness fabricated with ferritin iron core mask and chlorine neutral beam etching	Samukawa, Seiji; Kubota, Tomohiro; Huang, Chi-Hsien; Hashimoto, Takeshi; Shimura, T; Suzuki, Y; Soda, S; Samukawa, S; Koyanagi, M; Hane, K	Appl. Phys. Express	2008	1	
12	Ultraviolet-induced damage in fluorocarbon plasma and its reduction by pulse-time-modulated plasma in charge coupled device image sensor wafer processes	Okigawa, M; Ishikawa, Y; Ichihashi, Y; Samukawa, S	J. Vac. Sci. Technol. B	2004	22	2818
12	LOW RADIO-FREQUENCY BIASED ELECTRON-CYCLOTRON RESONANCE PLASMA-ETCHING	SAMUKAWA, S; TOYOSATO, T; WANI, E	Appl. Phys. Lett.	1991	58	896
11	Reduction of plasma-induced damage in SiO ₂ films during pulse-time-modulated plasma irradiation	Ishikawa, Y; Okigawa, M; Samukawa, S; Yamasaki, S	J. Vac. Sci. Technol. B	2005	23	389
11	Enhancement of reactivity in Au etching by pulse-time-modulated Cl-2 plasma	Ohtake, H; Samukawa, S; Oikawa, H; Nashimoto, Y	Jpn. J. Appl. Phys.	1998	37	2311
10	Optical absorption characteristic of highly ordered and dense two-dimensional array of silicon nanodiscs	Huang, Chi-Hsien; Wang, Xuan-Yu; Igarashi, Makoto; Murayama, Akihiro; Okada, Yoshitaka; Yamashita, Ichiro; Samukawa, Seiji	Nanotechnology	2011	22	
10	Prediction of UV spectra and UV-radiation damage in actual plasma etching processes using on-wafer monitoring technique	Jinnai, Butsurin; Fukuda, Seiichi; Ohtake, Hiroto; Samukawa, Seiji	J. Appl. Phys.	2010	107	
10	Two-Dimensional Si-Nanodisk Array Fabricated Using Bio-Nano-Process and Neutral Beam Etching for Realistic Quantum Effect Devices	Huang, Chi-Hsien; Igarashi, Makoto; Wone, Michel; Uraoka, Yukiharu; Fuyuki, Takashi; Takeguchi, Masaki; Yamashita, Ichiro; Samukawa, Seiji	Jpn. J. Appl. Phys.	2009	48	
10	Fabrication of FinFETs by damage-free neutral-beam etching technology	Endo, Kazuhiko; Noda, Shuichi; Masahara, Meishoku; Kubota, Tomohiro; Ozaki, Takuya; Samukawa, Seiji; Liu, Yongxun; Ishii, Kenichi; Ishikawa, Yuki; Sugimata, Etsuro; Matsukawa, Takashi; Takashima, Hidenori; Yamauchi, Hiromi; Suzuki, Eiichi	IEEE Trans. Electron Devices	2006	53	1826
10	High-performance and damage-free magnetic film etching using pulse-time-modulated Cl-2 plasma	Mukai, Tomonori; Hada, Hiromitsu; Tahara, Shuichi; Yoda, Hiroaki; Samukawa, Seiji	Jpn. J. Appl. Phys.	2006	45	5542
10	Highly selective and high rate SiO ₂ etching using argon-added C ₂ F ₄ /CF ₃ I plasma	Ohtake, H; Ishihara, H; Fuse, T; Koshiishi, A; Samukawa, S	J. Vac. Sci. Technol. B	2003	21	2142
10	High-performance and damage-free plasma etching processes for future ULSI patterning	Samukawa, S	Microelectron. Eng.	2000	53	69
10	Degree of Cl-2 dissociation and etching characteristics in high-density plasmas	Samukawa, S	J. Vac. Sci. Technol. A	1999	17	774
10	Effects of discharge frequency on plasma characteristics and etching characteristics in high density Cl-2 plasma: Comparison of ultrahigh-frequency plasma and radio-frequency plasma	Samukawa, S; Akashi, H	IEEE Trans. Plasma Sci.	1998	26	1621