

業績目録（羽根一博）

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令和 3 年 3 月
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ナノメカニクス講座（オプトメカニクス分野）

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専門分野

応用光学、機械光学、光デバイス

研究課題

- ・オプトメカトロニクスの研究
- ・マイクロオプティクスの研究
- ・光計測

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工学研究科附属マイクロ・ナノマシニング研究教育センター センター長

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学術受賞

電子情報通信学会東海支部創立50周年記念奨励賞 Award from Tokai division of the Institute of Electronics, Information and Communications Engineers [電子情報通信学会]

1988年

日本真空協会真空技術賞 Technical Award from the Vacuum Society of Japan [日本真空協会]

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精密工学会沼田記念論文賞 Numata memorial award from Japan Society for Precision Engineering [精密工学会]

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応用物理学会 フェロー表彰 [公益社団法人 応用物理学会]	2012年

著書

- 1) 超精密生産技術大系 第1巻 基本技術(執筆担当部分)マイクロマシニングの基本原理. [(1995)11月]
羽根一博
- 2) オプトメカトロニクスハンドブック(執筆担当部分)マイクロオプティカルセンサ(新しい展開) 計測分布への応用 マイクロプローブ. [(1997)]
羽根一博, 佐々木実
- 3) 光でナノテク・ナノサイエンス(執筆担当部分)ナノ周期構造の光学. [クバプロ, (2002)10月]
羽根一博
- 4) 光マイクロマシン. [オーム社, (2002)11月]
澤田廉士, 羽根一博, 日暮栄治
- 5) Opto-Mechatronic Systems Handbook. [CRC Press, (2003)6月]
K.Hane, M.Sasaki
- 6) 微細加工技術 [応用編] フォトニクス・エレクトロニクス・メカトロニクスへの応用(執筆担当部分)第3章 立体マイクロマシニングの光 MEMSへの応用 63頁-100頁. [NTS, (2003)7月]
橋詰富博, 松浦 徹, 羽根一博, 生田幸士, 松井真二, 南方 尚
- 7) 微細加工技術 応用編(執筆担当部分)立体的マイクロマシニングの光 MEMSへの応用. [エヌ・ティー・エス, (2003)7月]
羽根一博
- 8) 進化するマイクロマシン(執筆担当部分)4. 光 MEMS 123頁-139頁. [日刊工業新聞社, (2004)11月]
羽根一博, 平野隆之他 μM産業化研究会
- 9) 光ナノテクノロジー(執筆担当部分)マイクロマシニングとは, 立体的なシリコンマイクロマシニングと集積化技術. [アドスリー, (2005)4月]
羽根一博
- 10) 光工学. [コロナ社, (2006)1月]
羽根 一博
- 11) UV-EB 硬化技術の最新動向(執筆担当部分)4. MEMS 278頁-283頁. [シーエムシー出版, (2006)3月]
羽根一博 他
- 12) MEMS/NENS の最先端技術と応用展開(執筆担当部分)5. フォトニック素子 116頁-125頁. [フロンティア出版, (2006)5月]
羽根一博 他
- 13) ナノオプティクス・ナノフォトニクスのすべて(執筆担当部分)3. 光 MEMS の基礎 20頁-27頁. [フロンティア出版, (2006)7月]
羽根一博 他
- 14) Comprehensive Microsystems: Optical systems: Micro-mirrors. [Elsevier, (2007)5月]
M.Sasaki, K.Hane

- 15) MEMSデバイスの加工・実装・評価技術(執筆担当部分)第2章(第1節)75頁-85頁. [技術情報協会, (2007)7月]
羽根一博 他
- 16) ドライ・ウェットエッチング技術全集(執筆担当部分)第4章(第9節MEMSにおけるドライエッチング技術)366頁～374頁. [技術情報協会, (2009)3月]
吉田勇喜、青山哲男、平井聖児、松本克才、高井健次、小国隆志、江田義昭、山部紀久夫、楊振、荒川太郎、篠田和典、式田光宏、西尾英俊、石川典夫、村上豊、石井原耕一、浜口智志、花崎稔、奥村智洋、吉田典生、今井善之、橋本泰典、浅川潔、小島章弘、斧高一、林俊雄、村上彰一、羽根一博、三田吉郎、小風豊、神保武人、木村勲、倉持悟、竹井日出夫
- 17) UV・EB硬化技術V. [シーエムシー出版, (2011)7月]
西久保忠臣、竹中直巳、岡崎栄一、岡英隆、羽根一博他(監修・上田充)
- 18) 回折光学素子の数値解析とその応用(執筆担当部分)4.5.2(224頁～233頁). [丸善出版, (2011)12月]
監修: 小館香椎子・神谷武志 岩井広成、Werner Klaus, 岡恵子、岡本勝就、神谷武志、小館香椎子、駒井友紀、高山佳久、中山朋子、橋本信幸、羽根一博、藤野誠、渡邊恵理子
- 19) Optical MEMS, Nanophotonics, and Their(執筆担当部分)Chap. 10(Silicon photonic variable waveguide coupler devices). [CRC Press, (2018)6月]
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研究論文

- 1) Competition between different excitation processes of the Cd(II) $5s^{22}D_{5/2}$ state at low discharge currents in the positive column He-Cd $^+$ laser discharge. [J. of Physics D Applied Physics, **14**, (1981), 587-592]
T. Goto, K. Hane and S. Hattori
- 2) Excitation mechanism of the Cd(II) $5s^{22}D_{5/2}$ state in the positive column Ne-Cd $^+$ laser discharge and interpretation of the difference of 441.6nm laser output powers in Ne-Cd and He-Ne discharges. [Journal of Physics D: Applied Physics, **14** (5), (1981), 1603-1612]
T.Goto, K.Hane, S.Hattori
- 3) Ratio of excitation-cross sections for the Cd(II) $5s^{22}D_{5/2}$ and $5p\ ^2P_{3/2}$ states in Cd $^+$ ion-electron collisions. [J. of Physics D Applied Physics, **15**, (1982), L47-L49]
K. Hane, T. Goto and S. Hattori
- 4) Excitation cross sections of Cd $^+$ ions for the upper and lower states of the CdII 441.6-nm laser line by electron impact. [Physical Review A, **27**, (1983), 124-131]
K. Hane, T. Goto and S. Hattori
- 5) Emission cross sections of the CdII spectral lines in e-Cd $^+$ -ion collisions. [J. of Physics B Atomic and Molecular Physics, **16**, (1983), 629-637]
K. Hane, T. Goto and S. Hattori
- 6) Direct-excitation cross sections for CdII low-lying excited states by single-electron impact on Cd atoms. [Physical Review A, **27**, (1983), 1844-1850]
T. Goto, K. Hane, M. Okuda and S. Hattori
- 7) Emission cross sections for spectral lines transiting from the CdII $4d^95s5p$ states and high-lying $4d^{10}nl$ states excited by single-electron impact on Cd atoms. [Physical Review A, **29**, (1984), 111-115]
T. Goto, K. Hane and S. Hattori
- 8) EMISSION CROSS SECTIONS FOR THE LASER LINES OF I $^+$ BY ELECTRON-I $_2$ -MOLECULE COLLISIONS. [Physics Letters, **104A**, (1984), 146-148]
K. Hane, T. Goto and S. Hattori

- 9) Direct observation of double diffraction patterns. [Optics and Laser Technology, **16**, (1984), 307-310]
K. Hane and S. Hattori
- 10) Moire displacement measurement technique for a linear encoder. [Optics and Laser Technology, **17**, (1985), 89-95]
K. Hane, Y. Uchida and S. Hattori
- 11) MOIRE SIGNALS IN REFLECTION. [Optics Communications, **54**, (1985), 207-211]
V.T. CHITNIS, Y. UCHIDA, K. HANE and S. HATTORI
- 12) Tilt-insensitive film thickness measurement using a double twin-path interferometer. [Optics and Laser Technology, **17**, (1985), 208-212]
K. HANE, K. YONEDA and S.HATTORI
- 13) EXCITATION FUNCTIONS OF CdIII 4d⁸5s² (BEUTLER) STATES BY ELECTRON IMPACT ON Cd ATOMS. [Physics Letters, **114A**, (1986), 201-202]
S. INABA, K.HANE and T. GOTO
- 14) Double Twin Path Interferometer for Thin Film Thickness Measurement. [Japanese J. of Appl. Physics, **25**, (1986), 1078-1083]
V.T.CHITNIS, Y.Uchida, K.Hane, K.Yoneda and S.Hattori
- 15) Direct excitation cross sections of ZnII states excited by electron-Zn-atom collisions. [J. of Physics B: Atomic and Molecular Physics, **19**, (1986), 1371-1376]
S. Inaba, K. Hane and T. Goto
- 16) Measurements of very low gas flow velocities by photothermal deflection spectroscopy. [Appl. Optics, **25**, (1986), 3247-3252]
Y.X. Nie, K. Hane and R. Gupta
- 17) Imaging with rectangular transmission gratings. [Journal of the Optical Society of America A, **4**, (1987), 706-711]
K. Hane and C.P. Grover
- 18) Magnified grating images used in displacement sensing. [Applied Optics, **26**, (1987), 2355-2359]
Kazuhiro Hane and Chander P.Grover
- 19) Lau effect in reflection. [Journal of Modern Optics, **34**, (1987), 1481-1490]
K. HANE and S. HATTORI and C.P.GROVER
- 20) Photothermoelastic probing for a clamped plate sample. [Appl. Optics, **27**, (1988), 386-392]
Kazuhiro Hane, Tetsuo Kanie and Shuzo Hattori
- 21) Photo-thermoelastic mechanical beam chopper at a low frequency. [Review of Scientific Instruments, **59**, (1988), 655-656]
K. Hane, T. Kanie and S. Hattori
- 22) Photothermoelastic imaging at a flexural resonance frequency of a clamped plate sample. [J. of Appl. Physics, **64**, (1988), 2229-2232]
K. Hane, T. Kanie and S. Hattori
- 23) Photothermoelastic inspection of soldered connections. [Appl. Optics, **27**, (1988), 3965-3967]
Kazuhiro Hane and Shuzo Hattori
- 24) Noncontact tension sensing by the photothermoelastic effect. [Optics Letters, **13**, (1988), 550-552]
K. Hane and S. Hattori

- 25) インコヒーレント照明におけるグレーティングイメージングを用いた精密変位測定. [日本機械学会論文集 (C編), 54, (1988), 2487-2490]
羽根一博, 伊藤 孝, 服部秀三
- 26) Photothermal bending of a layered sample in plate form. [Applied Optics, 29, (1990), 145-150]
Kazuhiro Hane and Shuzo Hattori
- 27) A remote pressure sensing technique by using the photothermal bending effect. [Review of Scientific Instruments, 61, (1990), 2692-2695]
K. Hane, Y. Inahara and T. Goto
- 28) Moire signals by the photoacoustic effect. [Optics Letters, 15, (1990), 1318-1320]
K. Hane, S. Watanabe, S. Hattori and T. Goto
- 29) Resonance frequency shifts of a photothermal vibration in vacuum. [J. of Vacuum Sci. & Tech. A, 9, (1991), 2138-2139]
S. Inaba and K. Hane
- 30) Resonance frequency of a photothermal vibration for a polyethylene thin plate in medium vacuum region. [J. of vacuum Sci. & Tech. A, 9, (1991), 3173-3174]
S. Inaba and K. Hane
- 31) Photothermoelastic evaluation for small mechanical structures. [Applied Optics, 30, (1991), 72-78]
Kazuhiro Hane, Takashi Naito, and Shuzo Hattori
- 32) 円形回折格子のレーザ回折光を用いた基準位置検出法. [精密工学会誌, 57, (1991), 280-285]
伊藤昌文, 河口寿夫, 羽根一博, 松田文夫, 後藤俊夫
- 33) 十字回折ビームを用いた基準点の方向検出法. [計測自動制御学会論文集, 27, (1991), 368-370]
伊藤昌文, 羽根一博, 松田文夫, 内川嘉樹, 服部秀三
- 34) リソグラフィ・マークのレーザー回折光を用いた位置姿勢の検出法. [計測自動制御学会論文集, 27, (1991), 1188-1190]
伊藤昌文, 河口寿夫, 羽根一博, 松田文夫, 後藤俊夫
- 35) フォトサ-マル効果を用いた近接距離検出法. [精密工学会誌, 58, (1992), 139-144]
伊藤昌文, 羽根一博, 松田文夫, 後藤俊夫
- 36) 光熱弾性法によるはんだ接合部評価法の研究. [精密工学会誌, 58, (1992), 343-348]
斎藤雄之, 羽根一博
- 37) Pressure dependence of the resonance frequency for a photothermal vibration of a thin circular glass plate in vacuum. [Vacuum, 43, (1992), 291-292]
S. Inaba and K. Hane
- 38) Photothermal vibration for a membrane in water. [J. of Appl. Physics, 71, (1992), 3631-3632]
Seiki Inaba and Kazuhiro Hane
- 39) Optical sensing for pressure in a medium vacuum region by using the drum effect. [Appl. Optics, 31, (1992), 2969-2970]
Seiki Inaba and Kazuhiro Hane
- 40) Application of Photothermal Vibration to a Diaphragm Manometer in a Medium-Vacuum Region. [Japanese J. of Appl. Physics, 31, (1992), 2644-2645]
Seiki INABA and Kazuhiro HANE
- 41) Force microscope using a twin-path interferometer. [Journal of Vacuum Science & Technology B, 10, (1992), 1-5]

S. Watanabe, K. Hane and T. Goto

- 42) ディジタル信号処理 FM ヘテロダイン干渉法による近距離検出. [精密工学会誌, **58**, (1992), 1005-1010]
伊藤昌文, 羽根一博, 松田文夫, 後藤俊夫
- 43) Liquid density sensing by using a photothermal vibration. [Sensors and Actuators A, **33**, (1992), 163-166]
Seiki Inaba and Yoshiki Okuhara, kazuhiro Hane
- 44) Frequency shift on a micromachined resonator excited photothermally in vacuum. [Review of Scientific Instruments, **63**, (1992), 3781-3782]
K.Hane and T.Iwatuki, S.Inaba, S.Okuma
- 45) A compact interferometer using moire effect for the phase compensation. [Review of Scientific Instruments, **63**, (1992), 3856-3861]
S.Watanabe and K.Hane, T.Goto
- 46) Excitation of a progressive plate wave by the photo thermal effect. [Sensors and Actuators A, **35**, (1992), 87-91]
T. Iwatsuki, K. Hane and S. Okuma
- 47) フォース顕微鏡の荷重-たわみ曲線を用いたマイクロメカニカル構造の弾性評価法. [電気学会論文誌 A, **112**, (1992), 979-986]
鳥井昭宏, 佐々木実, 羽根一博, 大熊繁
- 48) Dependence of Resonance Frequency of a Membrane Vibrated Photothermally on Pressure and Geometry in a Low-Vacuum Region. [Japanese J. of Appl. Physics, **32**, (1993), 1001-1004]
Seiki INABA and Kazuhiro HANE
- 49) Analysis of the resonance characteristics for a cantilever vibrated photothermally in a liquid. [J. of Appl. Physics, **73**, (1993), 2654-2658]
Seiki Inaba, Kenya Akaishi and Takahiro Mori, Kazuhiro Hane
- 50) Photo thermal vibration for a cantilever placed near a planar wall in low-vacuum region. [Vacuum, **44**, (1993), 599-601]
S. Inaba, K. Akaishi and T. Mori, K. Hane
- 51) Electrostatic force microscope imaging analyzed by the surface charge method. [J. of Vacuum Sci. & Tech. B, **11**, (1993), 1774-1781]
S. Watanabe and K. Hane, T. Ohye, M. Ito and T. Goto
- 52) Dynamic mode force microscopy for the detection of lateral and vertical electrostatic forces. [Applied Physics Letters, **63**, (1993), 2573-2575]
S. Watanabe and K. Hane, M. Ito and T. Goto
- 53) Miniature actuator driven photothermally using a shape-memory alloy. [Review of Scientific Instruments, **64**, (1993), 1633-1635]
S. Inaba and K. Hane
- 54) 共通光路型光ヘテロダイン干渉計を用いた走査型力顕微鏡. [精密工学会誌, **59**, (1993), 1853-1858]
日野元人, 佐々木実, 藤田一彦, 別所芳則, 羽根一博, 大熊繁
- 55) The Feasibility of a Precise Linear Displacement Encoder Using Multiple Probe Force Microscope. [International Journal of The Japan Society for Precision Engineering, **27**, (1993), 367-372]
Akihiro TORII, Minoru SASAKI, Kazuhiro HANE and Shigeru OKUMA
- 56) Adhesion of microstructures investigated by atomic force microscopy. [Sensors and Actuators A, **40**, (1994), 71-76]
Akihiro Torii, Minoru Sasaki, Kazuhiro Hane and Shigeru Okuma

- 57) Nanometer-scale pit formation by scanning tunneling microscopy on graphite surface and tip current measurements. [J. of Applied Physics, **75**, (1994), 1228-1230]
 Tukasa Abe, Kazuhiro Hane and Shigeru Okuma
- 58) Adhesive force distribution on microstructures investigated by an atomic force microscope. [Sensors and Actuators A, **44**, (1994), 153-158]
 Akihiro Torii, Minoru Sasaki, Kazuhiro Hane and Shigeru Okuma
- 59) Shape of the cantilever deflection for the atomic force microscope in force curve measurements. [Review of Scientific Instruments, **65**, (1994), 1930-1934]
 Minoru Sasaki, Kazuhiro Hane, Shigeru Okuma and Yoshinori Bessho
- 60) Two-directional dynamic mode force microscopy : Detection of directional force gradient. [Journal of Vacuum Science & Technology B, **12**, (1994), 1577-1580]
 S.Watanabe and K.Hane, M.Ito and T.Goto
- 61) Improved differential heterodyne interferometer for atomic force microscopy. [Review of Scientific Instruments, **65** (12), (1994), 3697-3701]
 Minoru Sasaki, Kazuhiro Hane, Shigeru Okuma, Motohit Hino and Yoshinori Bessho
- 62) Temperature Dependence of Resonance Frequency of Shape- Memory Alloy Vibrated Photothermally. [Japanese Journal of Applied Physics, **33**, (1994), 5064-5066]
 Seiki INABA, Hironori KUMAZAKI, Masahiro HORIBE and Kazuhiro HANE
- 63) Scanning force microscope technique for adhesion distribution measurement. [Journal of Vacuum Science & Technology, **B13**, (1995), 350-354]
 Minoru Sasaki, Kazuhiro Hane, Shigeru Okuma and Akihiro Torii
- 64) Ultrasonic atomization of DNA solution for atomic force microscopy. [Journal of Vacuum Science & Technology, **B13**, (1995), 355-360]
 Minoru Sasaki, Shigeru Okuma, Keizou Miyata, Kazuhiro Hane and Yutaka Takeda
- 65) Characteristics of dc-voltage surface modification of graphite using scanning tunneling microscope. [International Journal of the Japan Society for Precision Engineering, **29**, (1995), 123-127]
 Tukasa Abe, Kazuhiro Hane and Shigeru Okuma
- 66) 半導体パルスレーザを用いた微小振動分布の縞走査干渉画像計測. [計測自動制御学会論文集, **31**, (1995), 454-460]
 中野 健, 吉田博樹, 羽根一博, 大熊繁, 江口正
- 67) Photothermal vibration of fiber core for vibration-type sensor. [Japanese Journal of Applied Physics, **34**, (1995), 2018-2021]
 Seiki Inaba, Hironori Kumazaki and Kazuhiro Hane
- 68) A double-focus lens interferometer for scanning force microscopy. [Review of Scientific Instruments, **66**, (1995), 3182-3185]
 Kazuya Goto, Minoru Sasaki and Shigeru Okuma Kazuhiro Hane
- 69) 变调周期の回折格子を用いた光学式エンコーダ(第1報)-実験的評価-. [精密工学会誌, **61**, (1995), 1312-1316]
 家城淳, 松井圭司, 梨木政行, 羽根一博
- 70) 变调周期の回折格子を用いた光学式エンコーダ(第2報)-理論解析-. [精密工学会誌, **61**, (1995), 1619-1623]
 家城淳, 松井圭司, 梨木政行, 羽根一博
- 71) Pit and mound formation on arc-evaporated carbon thin film using scanning tunneling microscopy. [Japanese Journal of Applied Physics, **35**, (1996), 1850-1856]
 Tukasa Abe, Kazuhiro Hane and Shigeru Okuma
- 72) Micromachining with a force microscope tip assisted by electrostatic froce. [Review of Scientific Instruments, **67**, (1996), 397-400]

Kazuya Goto and Kazuhiro Hane

- 73) A method for determining the spring constant of cantilevers for atomic force microscopy. [Measurement Science and Technology, **7**, (1996), 176-184]
Akihiro Torii, Minoru Sasaki, Kazuhiro Hane and Shigeru Okuma
- 74) 回折格子原子波干渉計の伝達関数による解析. [精密工学会誌, **62**, (1996), 943-947]
羽根一博, 高橋ひとみ
- 75) Optical transfer function analysis of Lau-type grating atom interferometer. [Optical Review, **3**, (1996), 207-210]
Kazuhiro Hane and Hitomi Takahashi
- 76) Pressure dependence of resonance characteristics of the microcantilever fabricated from optical fiber. [Vacuum, **47**, (1996), 475-477]
Hironori Kumazaki, Seiki Inaba and Kazuhiro Hane
- 77) Scanning tunneling microscopy study on monolayer pit formation on HOPG surface using oxygen plasma and thermal oxidation. [International Journal of The Japan Society for Precision Engineering, **30**, (1996), 118-121]
Tsukasa Abe, Kazuhiro Hane and Shigeru Okuma
- 78) Self-excited vibration of a self-standing thin film caused by laser irradiation. [Sensors and Actuators A, **51**, (1996), 179-182]
K.Hane and K.Suzuki
- 79) Temperature characteristics of vibrating type sensor using micromachined optical fiber-tip. [Optical Review, **3**, (1996), 135-138]
Hironori Kumazaki, Seiki Inaba and Kazuhiro Hane
- 80) ストロボ干涉法を用いた超音波モータ表面の振動分布計測. [日本機械学会論文集 (C編), **62**, (1996), 2237-2243]
中野健, 西澤五郎, 大熊繁, 羽根一博, 江口正
- 81) Ultrasonically facilitated two-dimensional crystallization of colloid particles. [Journal of Applied Physics, **80** (9), (1996), 5427-5431]
Minoru Sasaki and Kazuhiro Hane
- 82) Tapping mode capacitance microscopy. [Review of Science Instruments, **68**, (1997), 120-123]
Kazuya Goto and Kazuhiro Hane
- 83) Miro-objective manipulated with optical tweezers. [Applied Physics Letters, **70** (6), (1997), 785-787]
Minoru Sasaki, Tutomu Kurosawa and Kazuhiro Hane
- 84) Deposition thickness sensor for ion sputtering apparatus. [電気学会論文誌 E, **117** (E), (1997), 105-108]
Hironori Kumazaki, Seiki Inaba and Kazuhiro Hane
- 85) Visualization of 50MHz surface acoustic wave propagation using stroboscopic phase-shift interferometry. [Optical Review, **4**, (1997), 265-269]
Ken Nakano, Kazuhiro Hane, Shigeru Okuma and Tadashi Eguchi
- 86) 同軸レーザビームの走査による物体の形状抽出法. [精密工学会誌, **63**, (1997), 674-678]
羽根一博, 吉田充伸
- 87) Development of stroboscopic microscope using fringe scanning interferometry technique (FSIT). [Transaction of the Society of Instrument and Control Engineers, **33**, (1997), 570-575]
Ken Nakano, Kazuhiro Hane, Shigeru Okuma and Tadashi Eguchi
- 88) Bistability of a self-standing film caused by photothermal displacement. [Applied Optics, **36**, (1997), 5006-5009]

Kazuhiro Hane and Kentaro Suzuki

- 89) Automatic Alignment of Optical System Using Shape Memory Alloy. [Optical Review, **4** (5), (1997), 584-587]
Minoru Sasaki,Yuji Arai and Kazuhiro Hane
- 90) Si Micromachined Pinhole and Surrounding Photodiode for Incident Beam Position Sensing and Automatic Alignment. [Optical Review, **5** (2), (1998), 115-118]
Minoru Sasaki,Yuji Arai,Kazuhiro Hane
- 91) Application of a semiconductor tip to capacitance microscopy. [Applied Physics Letters, **73** (4), (1998), 544-546]
Kazuya Goto,Kazuhiro Hane
- 92) 金属表面回折格子を用いた光エンコ-ダ. [精密工学会誌, **64** (10), (1998), 1532-1536]
羽根一博, 奥山賢一, 佐々木実
- 93) Tip-sample capacitance in capacitance microscopy of dielectric films. [Journal of Applied Physics, **84** (8), (1998), 4043-4048]
Kazuya Goto,Kazuhiro Hane
- 94) Si 薄膜上に制作した透過型ポジションセンサ. [電学論 E, **118** (11), (1998), 538-539]
佐々木実, 竹辺仁, 羽根一博
- 95) Improved Automatic Alignment of Pinhole Integrated with Photodiode. [Japanese Journal of Applied Physics Part 1, **37** (12B), (1998), 7120-7123]
Minoru Sasaki,Yuji Arai,Wataru Kamada,Kazuhiro Hane
- 96) Transmission type position sensor for straightness measurement of large structure. [Journal of Micromechanics and Microengineering, (9), (1999), 429-433]
Minoru Sasaki, Hitoshi Takebe, Kazuhiro Hane
- 97) Tapping Mode Capacitance Microscopy of a Mitride-Oxide-Silicon Recording Medium. [Advances in Information Storage Systems, **10**, (1999), 301-311]
Kazuya Goto and Kazuhiro Hane
- 98) 計算機合成フレネルホログラムによる三次元露光. [精密工学会誌, **65** (1), (1999), 141-144]
羽根一博, 萩原隆志, 吉田充伸, 佐々木実
- 99) Optical encoder using slit-width-modulated grating. [Journal of Modern Optics, **46**, (1999), 1-14]
A.Ieki, K.Hane, T.Yoshizawa, K.Matsui and M.Nashiki
- 100) Optical Encoder Having Pitch-Modulated Photodiode Array. [電気学会論文誌 E, **119** (2), (1999), 86-93]
Toshiro Ohashi, Takayuki Hirano, Atsushi Ieki, Keiji Matsui, Masayuki Nashiki, Minoru Sasaki, Kazuhiro Hane
- 101) Theoretical Analysis of Optically Addressed Spatial Light Modulator with Electromagnetic Driven Micromirror for Optical Information Processing. [電気学会論文誌 E, **119** (8), (1999), 424-429]
T. Ohashi, M. Yoshida and K. Hane
- 102) Standing wave detection and interferometer application using a photodiode thinner than optical wavelength. [Applied Physics Letters, **75**, (1999), 2008-2010]
M. Sasaki, Xiaoyu Mi, K. Hane
- 103) Broadband antireflection gratings fabricated upon silicon structure. [Optics Letters, **24** (20), (1999), 1422-1424]
Y. Kanamori, M. Sasaki, K. Hane
- 104) Two-Dimensional Control of Shape-Memory-Alloy Actuators for Aligning a Si Micromachined Pinhole of Spatial Filter. [Japanese Journal of Applied Physics, **38**, (1999), 7190-7193]

M. Sasaki, Wataru Kamada, Kazuhiro Hane

- 105) Detection of Metastable Chlorine Ions in Time-Modulated Plasma by Time Resolved Laser-Induced Fluorescence. [Japanese Journal of Applied Physics, **38**, (1999), 7126-7130]
Shinya Kumagai, Minoru Sasaki, Mitsumasa Koyanagi, Kazuhiro Hane
- 106) Laser-Induced Fluorescence Measurement of Metastable Chlorine Ion Temperature in Time-Modulated Inductively Coupled Plasma. [Journal of The Electrochemical Society, **147** (8), (2000), 3070-3073]
S.Kumagai, M.Sasaki, M.Koyanagi, K.Hane
- 107) Broadband antireflection gratings for glass substrates fabricated by fast atom beam etching. [Japanese Journal of Applied Physics Part 2, **39**, (2000), L735-L737]
Y. Kanamori, H. Kikuta and K. Hane
- 108) Local mechanical properties measured by atomic force microscopy for cultured bovine endothelial cells exposed to shear stress. [Journal of Biomechanics, **33** (1), (2000), 127-135]
M. Sato, K. Nagayama, N. Kataoka, M. Sasaki, K. Hane
- 109) A novel doping technology for ultra-shallow junction fabrication: boron diffusion from boron-adsorbed layer by rapid thermal annealing. [Thin Solid Films, **369**, (2000), 207-212]
Ki-Seon Kim, Yun-Heub Song, Ki-Tae Park, Hiroyuki Kurino, Takashi Matsuura, Kazuhiro Hane, Mitsumasa Koyanagi
- 110) Full-fiber-type sensing system for physical quantities using a photothermally vibrated quartz-core cantilever. [電気学会論文誌E, **120-E** (3), (2000), 105-110]
Hironori Kumazaki, Seiki Inaba, Kazuhiro Hane
- 111) 変調周期の回折格子を用いた光学式エンコーダ（第3報）—高次ひずみ信号成分の除去. [精密工学会誌, **66**, (2000), 1087-1091]
家城 淳、松井圭司、梨木政行、羽根一博
- 112) Pitch-modulated phase grating and its application to displacement encoder. [Journal of Modern Optics, **47**, (2000), 1213-1225]
A.IEKI, K.MATSUI, M.NASHIKI and K.HANE
- 113) A Simple Si Pitch-variable Grating With Shape Memory Alloy Actuator. [電気学会論文誌, **120-E** (11), (2000), 503-508]
Yigui Li, Minoru Sasaki, Kazuhiro Hane
- 114) Short-range displacement detection from speckle interference using transparent thin-film photodiode. [Journal of Optics A: Pure and Applied Optics, **2**, (2000), 534-537]
M Sasaki, T. Hirano, X Mi and K Hane
- 115) Dominance of Cl₂₊ or Cl₊ Ions in Time-Modulated Inductively Coupled Cl₂ Plasma Investigated with Laser-Induced Fluorescence Technique and Probe Measurements. [Japanese Journal of Applied Physics, **39** (12B), (2000), 6980-6984]
Shinya Kumagai, Minoru Sasaki, Mitsumasa Koyanagi, Kazuhiro Hane
- 116) Anisotropically Etched Si Mold for Solid Polymer Dye Microcavity Laser. [Japanese Journal of Applied Physics, **39** (12B), (2000), 7145-7149]
Minoru Sasaki, Yigui Li, Yoshinori Akatu, Takehiro Fujii, Kazuhiro Hane
- 117) Cantilever Probe Integrated with Light-Emitting Diode, Waveguide, Aperture, and Photodiode for Scanning Near-Field Optical Microscope. [Japanese Journal of Applied Physics, **39** (12B), (2000), 7150-7153]
Minoru Sasaki, Kotaro Tanaka, Kazuhiro Hane
- 118) Micromachining of Optical Fiber Using Reactive Ion Etching and Its Application. [Japanese Journal of Applied Physics, **39**, (2000), 7142-7144]
Hironori KUMAZAKI, Yoshihiro YAMADA, Takamasa OSHIMA, Seiki INABA and Kazuhiro HANE

- 119) 100nm period silicon antireflection structures fabricated using a porous alumina membrane mask. [Applied Physics Letters, **78**, (2001), 142-143]
 Y.Kanamori and K.Hane, H.Sai and H.Yugami
- 120) Ultra-thin film photodiode for use in position sensors. [Journal of Modern Optics, **48** (1), (2001), 55-56]
 XIAOYU MI, MINORU SASAKI and KAZUHIRO HANE
- 121) 変調型フォトダイオードアレイを用いた絶対位置検出光エンコ-ダ. [日本機械学会論文誌 C, **67** (654), (2001), 364-369]
 家城淳, 羽根一博, 横山将史, 松井圭司, 梨木政行, 佐々木実
- 122) Chlorine molecular ions measured in time-modulated inductively coupled plasma by the laser-induced fluorescence technique. [Plasma Sources Science and Technology, **10**, (2001), 205-210]
 S.Kumagai, M.Sasaki, M.Koyanagi and K.Hane
- 123) A compact optical encoder with micromachined photodetector. [Journal of Optics: Pure and Applied Optics, **3**, (2001), 191-195]
 H.Hane, T.Endo, Y.Ito, M.Sasaki
- 124) Fabrication and testing of solid polymer dye microcavity lasers based on PMMA micromolding. [Journal of Micromechanics and Microengineering, **11**, (2001), 234-238]
 Yigui Li, Minoru Sasaki and Kazuhiro Hane
- 125) Interferometer based on standing wave detection using thin film photodetectors. [電気学会論文誌 E, **121-E**, (2001), 489-495]
 Xiaoyu Mi, Minoru Sasaki, Takayuki Hirano, Kazuhiro Hane
- 126) Spectral control of thermal emission by periodic microstructured surfaces in the near-infrared region. [Journal of Optical Society of America A, **18**, (2001), 1471-1476]
 H.Sai, H.Yugami, Y.Akiyama, Y.Kanamori, K.Hane
- 127) Tunable wavelength filter using a Bragg grating fiber thinned by plasma etching. [IEEE Photonics Technology Letters, **13**, (2001), 1206-1208]
 H.Kumazaki, Y.Yamada, H.Nakamura, S.Inaba, K.Hane,
- 128) Fabrication of grating couplers using submicron mold. [電気学会論文誌 E, **121-E** (6), (2001), 320-324]
 Yigui Li, Minoru Sasaki, Kazuhiro Hane
- 129) Basic Studies of Fiber-Optic MEMS for Telecommunication Using Three Dimensional Micromachining. [IEICE Transaction on Electronics, **E84-C**, (2001), 1785-1791]
 K.Hane, M.Sasaki, J.-H.Song, Y.Taguchi, K.Miura,
- 130) 立体的マイクロマシニングのためのレジストスプレーコーティング. [電気学会論文誌 E, **121-E**, (2002), 235-243]
 佐々木実、能川真一郎、羽根一博
- 131) Integration of grating-image-type encoder using Si micromachining. [Sensors and Actuators A, **97-98**, (2002), 139-146]
 K.Hane, T.Endo, M.Ishimori, Y.Ito, M.Sasaki
- 132) Broadband Antireflection Subwavelength Gratings for Polymethyl Methacrylate Fabricated with Molding Technique. [Optical Review, **9**, (2002), 183-185]
 Yoshiyuki Kanamori and Kazuhiro Hane
- 133) Tunable Fiber Bragg grating combined with microactuator. [Japanese Journal of Applied Physics, **41**, (2002), 4356-4361]
 M. Sasaki, K. Miura, K. Hane, K. Minami
- 134) High efficient light-emission diodes with antireflection subwavelength gratings. [IEEE Photonics Technology Letters, **14**, (2002), 1064-1066]

Y.Kanamori, M. Ishimori, K.Hane

- 135) Direct photolithography on optical fiber end. [Japanese Journal of Applied Physics, **41**, (2002), 4350-4355]
M.Sasaki, T.Ando, S.Nogawa, K.Hane,
- 136) Subwavelength Antireflection Gratings for Light Emitting Diodes and Photodiodes Fabricated by Fast Atom Beam Etching. [Japanese Journal of Applied Physics, **41**, (2002), 4346-4349]
M.Ishimori, Yoshiaki Kanamori, Minoru Sasaki, Kazuhiro Hane
- 137) Anisotropic Si Etching Condition for Preparing Optically Smooth surfaces. [Sensors and Materials, **15**, (2003), 89-92]
Minoru Sasaki, Takehiro Fjii, Kazuhiro Hane
- 138) Batch Fabrication of Microlens at the end of Optical Fiber using Self-photolithography and Etching Techniques. [Optical Review, **10**, (2003), 150-154]
Phan Ngoc MINH, Takahito ONO, Yoichi HAGA, Kazuma INOUE, Minoru SASAKI, Kazuhiro HANE and Masayoshi ESASHI
- 139) SPECTRALLY SELECTIVE THREMAL RADIATORS AND ABSORBERS WITH PERIODIC MICROSTRUCTUREED SURFACE FOR HIGH-TEMPERATURE APPLICATIONS. [Microscale Thermophysical Engineering, **7**, (2003), 101-115]
Hitoshi Sai and Hiroo Yugami, Yoshiaki Kanamori and Kazuhiro Hane
- 140) Solar selective absorbers based on two-dimentional W surface gratings with submicron periods of high-temperature photothermal conversion. [Solar Energy Materials & Solar Cells, **79**, (2003), 35-49]
Hitoshi Sai, Hiroo Yugami, Yoshiaki Kanamori, Kazuhiro Hane
- 141) Optical Scanner on a Three-Dimensional Microoptical Bench. [Journal of Lightwave Technology, **21**, (2003), 602-608]
M.Sasaki, T.Yamaguchi, J.-H. Song, K.Hane, M.Hara, K.Hori
- 142) MEMS Device for Controlling Evanescent Field on Side-Polished Optical Fiber. [Japanese Journal of Applied Physics, **42**, (2003), 2335-2338]
JongHyeong Song, Yohei Taguchi, Minoru Sasaki and Kazuhiro Hane
- 143) Fabrication of High-Accuracy Microtranslation Table for Near-Field Optical Data Storage Actuated by Inverted Scratch Drive Actuators. [Japanese Journal of Applied Physics, **42**, (2003), 4074-4078]
Yoshiaki Kanamori, Hiroto Yahagi, Takahito Ono, Minoru Sasaki and Kazuhiro Hane
- 144) Si-Wafer Bending Technique for a Three-Dimentional Microoptical Bench. [Japanese Journal of Applied Physics, **42**, (2003), 4063-4066]
Masahiro ISHIMORI, JongHyeong SONG, Minoru SASAKI and Kazuhiro HANE
- 145) Heating Effect on Photoresist in Spray Coating Technique for Three-Dimentional Lithography. [Japanese Journal of Applied Physics, **42**, (2003), 4027-4030]
Vijay Kumar SINGH, Minoru SASAKI, Jong Hyeong SONG and Kazuhiro HANE
- 146) Subwavelength Antireflection Gratings for GaSb in Visible and Near-Infrared Wavelength. [Japanese Journal of Applied Physics, **42**, (2003), 4020-4023]
Yoshiaki KANAMORI, Ken-ichi KOBAYASHI, Hiroo YUGAMI and Kazuhiro HANE
- 147) Three-dimensional SOI-MEMS constructed by buckled bridges and vertical comb drive actuator. [IEEE Journal of Selected Topics in Quantum Electronics, **10** (3), (2004), 455-461]
M.Sasaki, D.Biand, W.Noel, N.F.de Rooij, K.Hane
- 148) Flow Condition in Resist Spray and Patterning Performance for Three-Dimensional Photolithography over Deep Structures. [Japanese Journal of Applied Physics, **43**, (2004), 2387-2391]
Vijay Kumar SINGH, Minoru SASAKI, Kazuhiro HANE and Masayoshi ESASHI

- 149) Resonant Cavity Thin Film Photodiode for Compact Displacement Sensor. [Japanese Journal of Applied Physics, **43**, (2004), 2381-2386]
 Minoru SASAKI, Fuki NAKAI, Xiaoyu MI, and Kazuhiro Hane
- 150) 細胞の力学特性計測のためのレーザ顕微鏡組込み型原子間力顕微鏡 (AFM) システムの開発. [日本機械学会論文集 C 編, **70**, (2004), 736-742]
 長山和亮, 佐々木実, 羽根一博, 松本健郎, 佐藤正明
- 151) Fiber-optical switch using cam-micromotor driven by scratch drive actuator. [Journal of Micromechanics and Microengineering, **15** (1), (2005), 118-123]
 Y.Kanamori, Y.Aoki, M.Sasaki, H.Hosoya, A.Wada, K.Hane
- 152) Technique for preparing defect-free spray coated resist-film on three-dimensional micro-electromechanical systems. [Jpn. J. Appl. Phys., **44** (4A), (2005), 2016-2020]
 V. K. Singh, M. Sasaki, J.-H. Song, and K. Hane
- 153) Compact triangular sensor array constructed by wafer bending. [Jpn. J. Appl. Phys., **44** (4B), (2005), 2874-2878]
 S. Endou, M. Ishimori, M. Sasaki, K. Hane
- 154) ファイバ型光制御デバイスのための三次元的微細加工. [電気学会論文誌 E, **125-E** (5), (2005), 211-215]
 熊崎裕教, 稲葉成基, 羽根一博, 那須祐治
- 155) Modified photo-sensors for grating-image type micro-encoder. [Microsyst. Technol., **11** (8-10), (2005), 980-986]
 Y.Kanamori, R.Kamata, M.Mitamura, Y.Ito, K.Hane
- 156) Surface laser emission from solid polymer dye in a guided mode resonant grating filter structure. [Applied Physics Letters, **87** (15), (2005), 151106-1-151106-3]
 T. Kobayashi, Y. Kanamori, and K. Hane
- 157) Deposition of thin and uniform photoresist on three-dimensional structures using fast flow in spray coating. [J. Micromech. Microeng., **15** (12), (2005), 2339-2345]
 V. K. Singh, M. Sasaki, K. Hane, Y. Watanabe, H. Takamatsu, M. Kawakita, and H. Hayashi
- 158) A microtranslation table with scratch-drive actuators fabricated from silicon-on-insulator wafer. [Sensors and Actuators A, **125** (2), (2006), 451-457]
 Y. Kanamori, H. Yahagi, and K. Hane
- 159) Guided-mode resonant grating filter fabricated on silicon-on-insulator substrate. [Jpn. J. Appl. Phys., **45** (3A), (2006), 1883-1885]
 Y. Kanamori, T. Kitani, K. Hane
- 160) Imaging with a rectangular phase grating applied to displacement metrology. [Applied Optics, **45** (8), (2006), 1713-1720]
 Yoichi Ohmura, Toru Oka, Toshiro Nakashima, and Kazuhiro Hane
- 161) Piezoresistive rotation angle sensor integrated in micromirror. [Jpn. J. Appl. Phys., **45**, (2006), 3789-3793]
 M. Sasaki, K. Haga, M. Tabata, and K. Hane
- 162) Variable optical reflectance of a self-supported Si grating. [Applied Physics Letters, **88** (14), (2006), 141109-1-141109-3]
 K. Hane, T. Kobayashi, F. Hu, Y. Kanamori
- 163) 分割した櫛歯電極型静電駆動アクチュエータ. [電気学会論文誌 E, **126** (4), (2006), 168-169]
 佐々木実, 坊野史典, 羽根一博
- 164) 位相シフトマスクを利用した立体サンプルの露光法. [電気学会論文誌 E, **126** (6), (2006), 241-242]

佐々木実、 陳俊中エド温 , 羽根一博

- 165) Absolute micro-encoder using image obtained by ball lens assembled inside wafer. [Journal of Optics A:Pure and Applied Optics, **8**, (2006), S391-S397]
Minoru Sasaki, Fuki Nakai, Kazuhiro Hane, Kanji Yokomizo and Kazuhito Hori
- 166) Photonic crystal waveguide switch with a microelectromechanical actuator. [Applied Physics Letters, **89** (2), (2006), 021102-1-021102-3]
K.Umemori, Y.Kanamori, K.Hane
- 167) Molecular beam epitaxial growth of GaN thin film on Si substrate with InN as interlayer. [Journal of Crystal Growth, **294**, (2006), 197-201]
F.R. Hu, K. Ochi, Y.Zhao, B.S. Choi, K. Hane
- 168) Large-rotation and low-voltage driving of micromirror realized by tense thin-film torsion bar. [IEEE Photonics Technology Letters, **18** (15), (2006), 1573-1575]
M. Sasaki, S. Yuki, K. Hane
- 169) Self-supported subwavelength gratings with a broad band of high reflectance analyzed by the rigorous coupled-wave method. [J. Mod. Opt., **53** (14), (2006), 1995-2004]
J. S. Ye, Y. Kanamori, F.-R. Hu, K. Hane
- 170) Fabrication of transmission color filters using silicon subwavelength gratings on quartz substrates. [IEEE Photonics Technol. Lett., **18** (20), (2006), 2126-2128]
Y. Kanamori, M. Shimono, K. Hane
- 171) High efficiency light-emitting column-crystallized InGaN/GaN quantum-well flower structure on micropillared Si substrate. [Applied Physics Letters, **89**, (2006), 171903-1-171903-3]
F.R. Hu, K. Ochi, Y. Zhao, and K. Hane
- 172) Out-of-plane motion of 260-nm thick guided-mode resonant grating filter controlled by four micro-thermal actuators. [Microsystem Technologies, **13**, (2006), 867-872]
Y. Kanamori, T. Kitani, K. Hane
- 173) Tunable vertical comb for driving micromirror realized by bending drive wafer. [IEICE Trans. Electron., **E90-C** (1), (2007), 147-148]
M. Sasaki, M. Ishimori, J.-H. Song, K. Hane
- 174) Micromirror with two parallel rotation axes for external cavity diode laser. [IEICE Trans. Electron., **E90-C** (1), (2007), 72-77]
M. Ishimori, M. Sasaki, K. Hane
- 175) Control of guided resonance in a photonic crystal slab using microelectromechanical actuators. [Applied Physics Letters, **90** (3), (2007), 031911-1-031911-3]
Y. Kanamori, T. Kitani, K. Hane
- 176) Photonic crystal waveguide switches with movable slabs. [IEICE Transactions on Electronics, **E90-C** (1), (2007), 51-58]
K.Hane, k.Umemori, Y.Kanamori
- 177) Polymer microstructure generated by laser stereo-lithography and its transfer to silicon substrate using reactive ion etching. [Microsystem Technologies, **13**, (2007), 1411-1416]
Y.Kanamori, J.Sato, T.Shimano, S.Nakamura, K.Hane
- 178) Rigorous reflectance performance analysis of Si3N4 self-suspended subwavelength gratings. [Opt. Commun., **270** (2), (2007), 233-237]
J. S. Ye, Y. Kanamori, F.-R. Hu, K. Hane

- 179) Schottky ultraviolet photodiode using a ZnO hydrothermally grown single crystal substrate. [Applied Physics Letters, **90**, (2007), 121906-1-121906-3]
H. Endo, M. Sugibuchi, K. Takahashi, S. Goto, S. Sugimura, K. Hane, Y. Kashiwaba
- 180) Fabrication of MOSFET Capacitive Sensor using Spray Coating Method. [電気学会論文誌E, **127** (3), (2007), 153-159]
S. Aoyagi, Y. Matsui, K. Makihira, H. Tokunaga, M. Sasaki, K. Hane
- 181) Performance of Tense Thin-Film Torsion Bar for Large Rotation and Low-Voltage Driving of Micromirror. [IEEE Journal of Selected Topics in Quantum Electronics, **13** (2), (2007), 290-296]
Minoru Sasaki, Shinya Yuki and Kazuhiro Hane
- 182) Fabrication and Characterization of a Schottky Barrier Diode-Type Ultraviolet Sensor using a ZnO Single Crystal. [電気学会論文誌E, **127** (3), (2007), 131-135]
Haruyuki Endo, Mayo Sugibuchi, Kohsuke Takahashi, Shunsuke Goto, Tatsuo Hasegawa, Eriko Ohshima, Kazuyuki Meguro, Kazuhiro Hane, Yasube Kashiwaba
- 183) Narrow-band tunable optical filters using the self-suspended subwavelength grating. [Journal of Modern Optics, **54** (6, 15), (2007), 827-832]
J. S. Ye, Y. Kanamori, F.-R. Hu, K. Hane
- 184) Geometric characteristics of silicon cavities etched in EDP. [Journal of Micromechanics and Microengineering, **17**, (2007), 1012-1016]
H. Ju, T. Ohta, M. Ito, M. Sasaki, K. Hane and M. Hori
- 185) InGaN/GaN quantum-well nanocolumn crystals on pillared Si substrate with InN as interlayer. [physica status solidi(c), **4** (7), (2007), 2338-2341]
F.R. Hu, K. Ochi, Y. Zhao and K. Hane
- 186) Design and Fabrication of a Thin-Film Silicon Photodetector with Angular Sensitivity for Optical Micro-Encoder. [電気学会論文誌E, **127** (6), (2007), 309-313]
Bongseok Choi, Yoshiaki Kanamori, Kazuhiro Hane
- 187) Phase sensitive photodiode based on guided resonant absorption. [Applied Physics Letters, **90**, (2007), 241114-1-241114-3]
Bong-Seok Choi, Yoshiaki Kanamori and Kazuhiro Hane
- 188) Nanocolumn InGaN/GaN quantum-well crystals on flat anf pillared Si substrates with nitrified Ga as a buffer layer. [Nanotechnology, **18**, (2007), 275605-1-275605-6]
F.R. Hu, K. Ochi, Y. Zhao and K. Hane
- 189) Displacement sensor based on grating imaging with a cylindrical lens array and a phase grating. [Optical Engineering, **46**(7), (2007), 073603-1-073603-8]
Toru Oka, Yoichi Ohmura, Hajime Nakajima, Toshiro Nakashima, Wei Gao, Kazuhiro Hane, Satoshi Kiyono
- 190) Micromachined surface emitting dye laser with a self-suspended guided mode resonant grating. [Journal of Optics A: Pure and Applied Optics, **9**, (2007), 940-944]
Naoki Matsuyama, Yoshiaki Kanamori, Jia-Sheng Ye and Kazuhiro Hane
- 191) Angled Exposure Method for Pattering on Three-Dimensional Structures. [Japanese Journal of Applied Physics, **46** (9B), (2007), 6449-6453]
Vijay Kumar Singh, Minoru Sasaki and Kazuhiro Hane
- 192) A micro-displacement encoder using a thin-film resonant photodetector with directional sensitivity. [Journal of Optics A:Pure and Applied Optics, **9**, (2007), 1087-1094]
Bong-Seok Choi, Yoshiaki Kanamori and Kazuhiro Hane

- 193) A 100 nm thick InGaN/GaN multiple quantum-well column-crystallized thin film deposited on Si(111) substrate and its micromachining. [Nanotechnology, **19**, (2008), 035305-1-035305-6]
F R Hu, Y Kanamori, K Ochi, Y Zhao, M Wakui and K Hane
- 194) Theoretical Analysis of Mechanical-Contact-Based Submicron-Si-Waveguide Optical Microswitch at Telecommunication Wavelength. [電気学会論文誌 E, **128** (3), (2008), 80-84]
Erdal Bulgan, Yoshiaki Kanamori, Kazuhiro Hane
- 195) Development of MEMS Capacitive Sensor Using a MOSFET Structure. [電気学会論文誌 E, **128** (3), (2008), 102-107]
Hayato Izumi, Yohei Matsumoto, Seiji Aoyagi, Yusaku Harada, Shoso Shingubara, Minoru Sasaki, Kazuhiro Hane, Hiroshi Tokunaga
- 196) The optimization of sawtooth gratings using RCWA and its fabrication on a slanted silicon substrate by fast atom beam etching. [Journal of Micromechanics and Microengineering, **18**, (2008), 045014-1-045014-8]
ChaBum Lee, Kazuhiro Hane and SunKyu Lee
- 197) Submicron silicon waveguide optical switch driven by microelectromechanical actuator. [Applied Physics Letters, **92**, (2008), 101110-1-101110-3]
Erdal Bulgan, Yoshiaki Kanamori, and Kazuhiro Hane
- 198) Fabrication of a multi-level lens using independent-exposure lithography and FAB plasma etching. [Journal of Optics A: Pure and Applied Optics, **10**, (2008), 044001-1-044001-6]
Do Kyun Woo, Kazuhiro Hane and Sun-Kyu Lee
- 199) An optically flat micromirror using a stretched membrane with crystallization-induced stress. [Journal of Optics A : Pure and Applied Optics, **10**, (2008), 044004-1-044004-8]
Minoru Sasaki, Takashi Sasaki, Kazuhiro Hane and Hideo Miura
- 200) Large-Displacement Micro-XY-Stage with Paired Moving Plates. [Japanese Journal of Applied Physics, **47** (4), (2008), 3226-3231]
Minoru SASAKI, Fuminori BONO, and Kazuhiro HANE
- 201) GaN-Si-MEMS structure fabricated from nano-column GaN quantum well crystal grown on Si substrate. [Physica Status Solidi (C), **5** (6), (2008), 1941-1943]
F.R.Hu, R.Ito, Y.Zhao, and K.Hane
- 202) High-Sensitivity Mid-Ultraviolet Pt/Mg0.59Zn0.41O Schottky Photodiode on a ZnO Single Crystal Substrate. [Applied Physics Express, **1**, (2008), 051201-1-051201-3]
Haruyuki Endo, Michiko Kikuchi, Masahumi Ashioi, Yasuhiro Kashiwaba, Kazuhiro Hane, and Yasube Kashiwaba
- 203) Development of a compact vacuum-and hydrogen-annealing machine for surface transformation of silicon and its applications to micro-optical devices. [Journal of Vacuum Science and Technology A, **26** (3), (2008), 365-369]
Yoshiaki Kanamori, Kenichi Douzono, Shinya Fujihira, and Kazuhiro Hane
- 204) Silicon Suspended Resonant Grating Filters Fabricated From a Silicon-on-Insulator Wafer. [IEEE Photonics Technology Letters, **20** (10), (2008), 851-853]
Jia-Sheng Ye, Naoki Matsuyama, Yoshiaki Kanamori, and Kazuhiro Hane
- 205) Fabrication and characteristics of a Pt/MgxZn1-xO Schottky photodiode on a ZnO single crystal. [Physica Status Solidi (C), **5**, (2008), 3119-3121]
Haruyuki Endo, Mayo Sugibuchi, Kohsuke Takahashi, Shunsuke Goto, Kazuhiro Hane and Yasube Kashiwaba
- 206) Parametric optimization of narrow bandstop optical filters using the self-suspended subwavelength grating for TE polarization. [Journal of Modern Optics, **55** (10), (2008), 1519-1528]
Jia-Sheng Ye, Yoshiaki Kanamori, Fang-Ren Hu, Kazuhiro Hane

- 207) Fabrication of Analog- and Digital-Modulated Pitch-Variable Gratings Using Silicon-on-Insulator Substrates. [Japanese Journal of Applied Physics, **47** (6), (2008), 5274-5277]
 Yoshiaki KANAMORI, Takashi KOBAYASHI, and Kazuhiro HANE
- 208) Compact Triangulation Sensor Realized by Bending Si Wafer with Optical Elements at Metal Hinges. [電気学会論文誌 E, **128** (6), (2008), 271-276]
 Minoru Sasaki, Satoshi Endou, Kazuhiro Hane
- 209) Design of retrodiffraction gratings for polarization-insensitive and polarization-sensitive characteristics by using the Taguchi method. [Applied Optics, **47** (18), (2008), 3246-3253]
 ChaBum Lee, Kazuhiro Hane, WanSoo Kim, and Sun-Kyu Lee
- 210) Resonant-wavelength turning of a pitch-variable 1D photonic crystal filter at telecom frequencies. [IEEE Photonics Technology Letters, **20** (13), (2008), 1136-1138]
 Yoshiaki Kanamori, Naoki Matsuyama, and Kazuhiro Hane
- 211) A wavelength-selective add-drop switch using silicon microring resonator with a submicron-comb electrostatic actuator. [Optics Express, **16** (19), (2008), 14421-14428]
 Kazunori Takahashi, Yoshiaki Kanamori, Yasuo Kokubun, and Kazuhiro Hane
- 212) High order diffraction grating using v-shaped groove with refractive and reflective surfaces. [Optics Express, **16** (25), (2008), 21004-21011]
 Do-Kyun Woo, Kazuhiro Hane, and Sun-Kyu Lee
- 213) Design and fabrication of freestanding pitch-variable blazed gratings on a silicon-on-insulator wafer. [Journal of Micromechanics and Microengineering, **19**, (2009), 025019-1-025019-7]
 Yongjin Wang, Yoshiaki Kanamori, Takashi Sasaki and Kazuhiro Hane
- 214) GaN-based nitride semiconductor films deposited on nitrified HfO₂/Si substrate by molecular beam epitaxy. [Journal of Crystal Growth, **311**, (2009), 2996-2999]
 F.R. Hu, H. Samashima, M. Wakui, R. Ito, K. Hane
- 215) Pitch-variable blazed grating consisting of freestanding silicon beams. [Optics Express, **17** (6), (2009), 4419-4426]
 Yongjin Wang, Yoshiaki Kanamori, and Kazuhiro Hane
- 216) MBE Fabrication of GaN-Based Light Emitting Diode on MOCVD Grown GaN-on-Si Template and Application for Optical MEMS. [電気学会論文誌 E, **129** (3), (2009), 77-80]
 Masashi Wakui, Ryousuke Ito, Fang-Ren Hu, Hidehisa Sameshima, Kazuhiro Hane
- 217) Fabrication and characterization of nanoscale resonant gratings on thin silicon membrane. [Optics Express, **17** (7), (2009), 4938-4943]
 Yongjin Wang, Yoshiaki Kanamori, Jiasheng Ye, Hidehisa Sameshima, Kazuhiro Hane
- 218) Fabrication of Subwavelength Gratings on Silicon Micro Lenses for MEMS Scanners at Optical Communication Wavelengths. [電気学会論文誌 E, **129** (4), (2009), 120-124]
 Yoshiaki Kanamori, Mao Miura, Kazuhiro Hane
- 219) Submicrometer Comb-Drive Actuators Fabricated on Thin Single Crystalline Silicon Layer. [IEEE Transactions on Industrial Electronics, **56** (4), (2009), 991-995]
 Kazunori Takahashi, Erdal Bulgan, Yoshiaki Kanamori, and Kazuhiro Hane
- 220) Tunable optical filters with nanostructured suspended gratings. [Journal of Vacuum Science and Technology B, **27** (3), (2009), 1035-1038]
 Jia-Sheng Ye, Takashi Kobayashi, Yoshiaki Kanamori, Fang-Ren Hu, and Kazuhiro Hane
- 221) Characteristics and Improved Design of Piezoresistive Rotation Angle Sensor Integrated in Micromirror Device. [Japanese Journal of Applied Physics, **48**, (2009), 04C191-1-04C191-6]

Takuro Aonuma, Shinya Kumagai, Minoru Sasaki, Motoki Tabata, and Kazuhiro Hane

- 222) Improved first Rayleigh-Sommerfeld method applied to metallic cylindrical focusing micro mirror. [Optics Express, **17** (9), (2009), 7348-7360]

Jia-Sheng Ye, Yan Zhang, and Kazuhiro Hane

- 223) Stress Control of Silicon Membrane for Optical Scanner with Deformable Mirror. [電気学会論文誌 E, **129** (5), (2009), 138-141]

Takashi Sasaki, Kazuhiro Hane

- 224) Development of an integral optics system for a slim optical mouse in a slim portable electric device. [Journal of Vacuum Science and Technology B, **27** (3), (2009), 1422-1427]

Do-Kyun Woo, Kazuhiro Hane, Seong-Cheon Cho and Sun-Kyu Lee

- 225) Design and Fabrication of Structural Color Filters with Polymer-Based Guided-Mode Resonant Gratings by Nanoimprint Lithography. [Japanese Journal of Applied Physics, **48**, (2009), 06FH04-1-06FH04-4]

Yoshiaki Kanamori, Hiroki Katsume, Tomonobu Furuta, Shoji Hasegawa, and Kazuhiro Hane

- 226) Freestanding circular GaN grating fabricated by fast-atom beam etching. [Applied Physics A, **97**, (2009), 39-43]

Yongjin Wang, Fangren Hu, Masashi Wakui, Kazuhiro Hane

- 227) A Varifocal Convex Micromirror Driven by a Bending Moment. [IEEE Journal of Selected Topics in Quantum Electronics, **15** (5), (2009), 1310-1316]

Ryohei Hokari and Kazuhiro Hane

- 228) A Freestanding GaN/HfO₂ Membrane Grown by Molecular Beam Epitaxy for GaN-Si Hybrid MEMS. [IEEE Journal of Selected Topics in Quantum Electronics, **15** (5), (2009), 1332-1337]

Hidehisa Sameshima, Masashi Wakui, Fang-Ren Hu, and Kazuhiro Hane

- 229) Simultaneous Realization of Stabilized Temperature Characteristics and Low-Voltage Driving of Micromirror Using the Thin Film Torsion Bar of Tensile Poly-Si. [IEEE Journal of Selected Topics in Quantum Electronics, **15** (5), (2009), 1455-1461]

Minoru Sasaki, Masayuki Fujishima, Kazuhiro Hane, and Hideo Miura

- 230) Freestanding GaN Resonant Gratings at Telecommunication Range. [IEEE Photonics Technology Letters, **21** (17), (2009), 1184-1186]

Yongjin Wang, Fangren Hu, Masashi Wakui, and Kazuhiro Hane

- 231) Vacuum operation of comb-drive micro display mirrors. [Journal of Micromechanics and Microengineering, **19**, (2009), 105018-1-105018-8]

Chu Hoang Manh and Kazuhiro Hane

- 232) 精密プレス成形による導光板端面への光回折格子の製作. [日本機械学論文集(C編), **75** (759), (2009), 2853-2858]

金森義明、菱沼知佳、羽根一博

- 233) An ultrasmall wavelength-selective channel drop switch using a nanomechanical photonic crystal nanocavity. [Applied Physics Letters, **95** (17), (2009), 171911-1-171911-3]

Yoshiaki Kanamori, Kazunori Takahashi, Kazuhiro Hane

- 234) Narrow-bandwidth tunable bandstop filters with circularly cylindrical self-suspended silicon gratings. [Optik, **121**, (2010), 1389-1394]

Jia-Sheng Ye, Yoshiaki Kanamori, Fang-Ren Hu, Kazuhiro Hane

- 235) Fabrication and characterization of freestanding circular GaN gratings. [Optics Express, **18** (2), (2010), 773-779]

Yongjin Wang, Fangren Hu, Hidehisa Sameshima, Kazuhiro Hane

- 236) Freestanding GaN slab fabricated on patterned silicon on an insulator substrate. [Journal of Micromechanics and Microengineering, **20** (2), (2010), 027001-1-027001-5]
 Yongjin Wang, Fangren Hu, Kazuhiro Hane
- 237) Fabrication and characterization of subwavelength nanostructures on freestanding GaN slab. [Optics Express, **18** (3), (2010), 2940-2945]
 Yongjin Wang, Fangren Hu, Yoshiaki Kanamori, Hidehisa Sameshima, Kazuhiro Hane
- 238) Buckled Bridges Using Film Stress for Three-Dimensional Structures: Effect of Lateral Designs on Vertical Profiles and Dynamic Characteristics. [IEEJ Transactions on Electrical and Electronic Engineering, **5** (2), (2010), 131-136]
 M.Sasaki, K.Hane, D.Briand, W.Noel, N.F. de Rooij
- 239) Growth of GaN LED Structure on Si Substrate by MBE and Monolithic Fabrication of GaN LED Cooling System. [IEEJ Transactions on Electrical and Electronic Engineering, **5** (2), (2010), 171-174]
 Masashi Wakui, Fang-Ren Hu, Hidehisa Sameshima, Kazuhiro Hane
- 240) 近赤外光用サブ波長反射防止構造の光学設計および自己組織化ナノ微粒子を用いた製作. [電気学会論文誌 E, **130** (3), (2010), 92-96]
 金森義明, 灰田周平, 羽根一博
- 241) Large area, freestanding GaN nanocolumn membrane with bottom subwavelength nanostructure. [Optics Express, **18** (6), (2010), 5504-5511]
 Yongjin Wang, Fangren Hu, Yoshiaki Kanamori, Tang Wu, Kazuhiro Hane
- 242) Phase-shifter using submicron silicon waveguide couplers with ultra-small electro-mechanical actuator. [Optics Express, **18** (7), (2010), 7031-7037]
 Taro Ikeda, Kazunori Takahashi, Yoshiaki Kanamori, and Kazuhiro Hane
- 243) Monolithic micro-fabrication of Si micro-electro-mechanical structure with GaN light emitting diode. [Microsystem Technologies, **16** (6), (2010), 1015-1020]
 R. Ito, M. Wakui, H. Sameshima, F.-R. Hu, K. Hane
- 244) Compact Low-Voltage Operation Micromirror Based on High-Vacuum Seal Technology Using Metal Can. [IEEE Journal of Microelectromechanical Systems, **19** (4), (2010), 927-935]
 Hoang Manh Chu, Takayuki Tokuda, Masafumi Kimata, and Kazuhiro Hane
- 245) ナノインプリント法による光ファイバ端面への反射防止サブ波長構造の製作. [日本機械学会論文誌 (C編), **76** (771), (2010), 2854-2860]
 金森義明、大河内昌章、羽根一博
- 246) Patterned growth of InGaN/GaN quantum wells on freestanding GaN grating by molecular beam epitaxy. [Nanoscale Research Letters, **6** (1), (2011), 117-1-117-7]
 Yongjin Wang, Fangren Hu, Kazuhiro Hane
- 247) Fabrication of GaN light emitting diode membrane on Si substrate for MEMS applications. [Microsystem Technologies, **17** (1), (2011), 109-114]
 M. Wakui, H. Sameshima, F.-R. Hu, K. Hane
- 248) Design, fabrication and vacuum operation characteristics of two-dimensional comb-drive micro-scanner. [Sensors and Actuators A:Physical, **165** (2), (2011), 422-430]
 Hoang Manh Chu, Kazuhiro Hane
- 249) Comb-drive GaN micro-mirror on a GaN-on-silicon platform. [Journal of Micromechanics and Microengineering, **21**, (2011), 035012-1-035012-5]
 Yongjin Wang, Takashi Sasaki, Tong Wu, Fangren Hu and Kazuhiro Hane
- 250) A GaN Electromechanical Tunable Grating on Si Substrate. [IEEE Photonics Technology Letters, **23** (5), (2011), 281-283]

Hidehisa Sameshima, Takuma Tanae, and Kazuhiro Hane

- 251) Lateral epitaxial overgrowth of GaN on a patterned GaN-on-silicon substrate by molecular beam epitaxy. [Semiconductor Science and Technology, **26**, (2011), 045015-1-045015-6]

Yongjin Wang, Fangren Hu and Kazuhiro Hane

- 252) Freestanding HfO₂ grating fabricated by fast atom beam etching. [Nanoscale Research Letters, **6**, (2011), 367-1-367-5]

Yongjin Wang, Tong Wu, Yoshiaki Kanamori and Kazuhiro Hane

- 253) Investigation of strain sensing effect in modified single-defect photonic crystal nanocavity. [Optics Express, **19** (9), (2011), 8821-8829]

Bui Thanh Tung, Dzung Viet Dao, Taro Ikeda, Yoshiaki Kanamori, Kazuhiro Hane, and Susumu Sugiyama

- 254) Spherical silicon micromirrors bent by anodic bonding. [Optics Express, **19** (12), (2011), 11897-11905]

Tong Wu, Takahiro Yamasaki, Ryohei Hokari, and Kazuhiro Hane

- 255) Compact slanted comb two-axis micro-mirror scanner fabricated by silicon-on-insulator micromachining. [Journal of Vacuum Science and Technology B, **29** (4), (2011), 042001-1-042001-7]

Hoang Manh Chu, Jun Mizuno, and Kazuhiro Hane Toshiyuki Takagi

- 256) 細いフレームを持つ焦点可変ミラーの SOI ウエハ残留応力による変形. [電気学会論文誌 E, **131** (8), (2011), 310-315]

佐々木 敬、羽根一博

- 257) III-Nitride grating grown on freestanding HfO₂ gratings. [Nanoscale Research Letters, **6**, (2011), 497-1-497-5]

Yongjin Wang, Tong Wu, Fangren Hu, Yoshiaki Kanamori, Hongbo Zhu, Kazuhiro Hane

- 258) The resonant III-nitride grating reflector. [Journal of Micromechanics and Microengineering, **21**, (2011), 105025-1-105025-6]

Yongjin Wang, Tong Wu, Takuma Tanae, Hongbo Zhu and Kazuhiro Hane

- 259) Fabrication of a high-precision spherical micromirror by bending a silicon plate with a metal pad. [Applied Optics, **50** (27), (2011), 5321-5328]

Tong Wu and Kazuhiro Hane

- 260) Ultra-small silicon waveguide coupler switch using gap-variable mechanism. [Optics Express, **19** (24), (2011), 23658-23663]

Yuta Akihama, Yoshiaki Kanamori, and Kazuhiro Hane

- 261) Initial deflection of silicon-on-insulator thin membrane micro-mirror and fabrication of varifocal mirror. [Sensors and Actuators A, **172** (2), (2011), 516-522]

Takashi Sasaki, Kazuhiro Hane

- 262) Single layer silicon photonic crystal slab. [Photonics and Nanostructures - Fundamentals and Applications, **10** (1), (2012), 146-152]

Yongjin Wang, Yoshiaki Kanamori, Hongbo Zhu, Kazuhiro Hane

- 263) Comb-drive tracking and focusing lens actuators integrated on a silicon-on-insulator wafer. [Optics Express, **20** (1), (2012), 627-632]

P. Li, T. Sasaki, L.F. Pan, and K. Hane

- 264) Design and fabrication of GaN crystal ultra-small lateral comb-drive actuators. [Journal of Vacuum Science and Technology B, **30** (1), (2012), 012001-1-012001-8]

Takuma Tanae, Hidehisa Sameshima, and Kazuhiro Hane

- 265) Micro-mirror laser scanner combined with a varifocal mirror. [Microsystem Technologies, **18** (4), (2012), 475-480]

R. Hokari, K. Hane

- 266) Single and multiple optical switches that use freestanding silicon nanowire waveguide couplers. [Light: Science & Applications, **1**, (2012), e16-1-e16-8]
 Yuta Akihama and Kazuhiro Hane
- 267) 光ナノインプリント法による光ファイバ端面への反射防止サブ波長構造の製作. [日本機械学会論文集 (C編), **78** (790), (2012), 2322-2330]
 金森義明, 大河内昌章, 羽根一博
- 268) Varifocal Micromirror Integrated With Comb-Drive Scanner on Silicon-on-Insulator Wafer. [Journal of Microelectromechanical Systems, **21** (4), (2012), 971-980]
 Takashi Sasaki and Kazuhiro Hane
- 269) Micro fluorescent analysis system integrating GaN-light-emitting-diode on a silicon platform. [Lab on a Chip, **12** (18), (2012), 3419-3425]
 Hiroto Nakazato, Hiroko Kawaguchi, Akio Iwabuchi and Kazuhiro Hane
- 270) Low Voltage Operation Electrostatic Comb Drive Micro-Mirror for Laser Scanning Display. [Vietnam Journal of Mechanics, **34** (4), (2012), 1-10]
 Hoang Manh Chu, Hung Vu Ngoc, Kazuhiro Hane
- 271) Growth of GaN nanowall network on Si (111) substrate by molecular beam exitaxy. [Nanoscale Research Letters, **7** (12), (2012), 686-1-686-7]
 Aihua Zhong and Kazuhiro Hane
- 272) Fabrication of antireflection subwavelength gratings at the tips of optical fibers using UV nanoimprint lithography. [Optics Express, **21** (1), (2013), 322-328]
 Yoshiaki Kanamori, Masaaki Okochi, and Kazuhiro Hane
- 273) Wavelength Characteristics of a Gap-Variable Silicon Nanowire Waveguide Coupler Switch Using Micro Actuator. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **133** (3), (2013), 85-89]
 Yasushi Munemasa, Yuta Akihama, Kazuhiro Hane
- 274) An analytical coupling coefficient for MEMS tunable silicon nanowire waveguide coupler devices. [Microsystem Technologies, **19** (4), (2013), 583-589]
 Y. Akihama, K. Hane
- 275) Electric feed-through for vacuum package using double-side anodic bonding of silicon-on-insulator wafer. [Journal of Electrostatics, **71** (2), (2013), 130-133]
 Hoang Manh Chu, Hung Ngoc Vu, Kazuhiro Hane
- 276) Micromirrors connected in series for low voltage operation in vacuum. [Journal of Vacuum Science and Technology B, **31** (4), (2013), 42001-1-42001-6]
 Seibou Kotani, Hoang Manh Chu, Takashi Sasaki, and Kazuhiro Hane
- 277) Variable-gap silicon photonic waveguide coupler switch with a nanolatch mechanism. [IEEE Photonics Technology Letters, **25** (7), (2013), 675-677]
 Syotaro Abe and Kazuhiro Hane
- 278) Characterization of GaN Nanowall Network and Optical Property of InGaN/GaN Quantum Wells by Molecular Beam Epitaxy. [Japanese Journal of Applied Physics, **52** (8), (2013), 08JE13-1-08JE13-4]
 Aihua Zhong and Kazuhiro Hane
- 279) Nonlinear spring effect of tense thin-film torsion bar combined with electrostatic driving. [Sensors and Actuators A, **195**, (2013), 83-89]
 Subrata Kumar Kundu, Shouhei Ogawa, Shinya Kumagai, Masayuki Fujishima, Kazuhiro Hane, Minoru Sasaki
- 280) A Compact 1 x 3 Silicon Photonic Waveguide Switch Based on Precise Investigation of Coupling Characteristics of Variable-Gap Coupler. [Japanese Journal of Applied Physics, **52** (6), (2013), 06GL15-1-06GL15-6]

Yasushi Munemasa and Kazuhiro Hane

- 281) A microelectromechanically tunable microring resonator composed of freestanding silicon photonic waveguide couplers. [Applied Physics Letters, **102** (22), (2013), 221113-1-221113-4]

Taro Ikeda and Kazuhiro Hane

- 282) Fabrication of Silicon Microdisk Resonators with Movable Waveguides for Control of Power Coupling Ratio. [Japanese Journal of Applied Physics, **52** (6), (2013), 06GL19-1-06GL19-5]

Yoshiaki Kanamori, Yuichi Sato, and Kazuhiro Hane

- 283) A tunable notch filter using microelectromechanical microring with gap-variable busline coupler. [Optics Express, **21** (19), (2013), 22034-22042]

Taro Ikeda and Kazuhiro Hane

- 284) Transmisson-Width-Tunable Silicon-Photonic Microelectromechanical Ring Resonator. [IEEE Photonics Technology Letters, **25** (22), (2013), 2236-2238]

Mustafa Ordu and Kazuhiro Hane

- 285) Large-scale membrane transfer process: its application to single-crystal-silicon continuous membrane deformable mirror. [Journal of Micromechanics and Microengineering, **23** (12), (2013), 125003-1-125003-11]

Tong Wu, Takashi Sasaki, Masayuki Akiyama, Kazuhiro Hane

- 286) Numerical study on resonant wavelength control of split ring resonators with inductance variable structures in the optical wavelength region. [Transactions of the Materials Research Society of Japan, **38** (4), (2013), 615-618]

Ryohei Hokari, Yoshiaki Kanamori and Kazuhiro Hane

- 287) Comparison of electromagnetically induced transparency between silver, gold, and aluminum metamaterials at visible wavelengths. [Optics Express, **22** (3), (2014), 3526-3537]

Ryohei Hokari, Yoshiaki Kanamori, and Kazuhiro Hane

- 288) Simultaneous measurement of bend direction and degree of curvature using micromachined grating fibers. [電気学会論文誌 E(センサマイクロマシン部門誌), **134** (3), (2014), 41-46]

Hiromori Kumazaki, Munehiro Hiramatsu, Hisakazu Oguri, Seiki Inaba, Kazuhiro Hane

- 289) Platinum/porous GaN nanonetwork metal-semiconductor Schottky diode for room temperature hydrogen sensor. [Sensors and Actuators A: Physical, **209**, (2014), 52-56]

Aihua Zhong, Takashi Sasaki, Kazuhiro Hane

- 290) Vacuum Package Using Anodic Bonding Assisted by the Reflow of Low-Melting Temperature Metal. [International Journal of Precision Engineering and Manufacturing, **15** (4), (2014), 695-701]

Hoang Manh Chu, Hung Vu Ngoc and Kazuhiro Hane

- 291) Comparative study of Schottky diode type hydrogen sensors based on a honeycomb GaN nanonetwork and on a planar GaN film. [International Journal of Hydrogen Energy, **39**, (2014), 8564-8575]

Aihua Zhong, Takashi Sasaki, and Kazuhiro Hane

- 292) Fabrication of planar metamaterials with sharp and strong electromagnetically induced transparency-like characteristics at wavelengths around 820 nm. [Journal of Optical Society of America B, **31** (5), (2014), 1000-1005]

Ryohei Hokari, Yoshiaki Kanamori, and Kazuhiro Hane

- 293) アコースティックエミッショントリニティ計測のためのカンチレバーを用いた超音波センサの製作と真空中特性. [電気学会論文誌 E(センサ・マイクロマシン部門誌), **134** (7), (2014), 212-217]

高田健伍、佐々木敬、田中満之、齊藤 寛、松浦大輔、羽根一博

- 294) Experimental demonstration of sharp Fano resonance in optical metamaterials composed of asymmetric double bars. [Optics Letters, **39** (13), (2014), 4057-4060]

Yuto Moritake, Yoshiaki Kanamori, and Kazuhiro Hane

- 295) A Wide-Tuning Silicon Ring-Resonator Composed of Coupled Freestanding Waveguides. [IEEE Photonics Technology Letters, **26**, (2014), 1411-1413]
 Hoang Manh Chu, Kazuhiro Hane
- 296) 機械共振による変位拡大を利用した焦点可変ミラーの基礎特性. [電気学会論文誌 E (センサマイクロマシン部門誌), **134** (8), (2014), 253-257]
 佐々木 敬、佐藤大紀、中澤謙太、羽根一博
- 297) Time Response of a Microelectromechanical Silicon Photonic Waveguide Coupler Switch. [IEEE Photonics Technology Letters, **26** (15), (2014), 1553-1556]
 Syotaro Abe, Manh Hoang Chu, Takashi Sasaki, and Kazuhiro Hane
- 298) A silicon microring resonator with a nanolatch mechanism. [Microsystem Technologies, **21** (9), (2014), 2019-2024]
 Syotaro Abe and Kazuhiro Hane
- 299) Fabrication of Ultrathin Color Filters for Three Primary Colors Using Guided-Mode Resonance in Silicon Subwavelength Gratings. [Optical Review, **21** (5), (2014), 723-727]
 Yoshiaki Kanamori, Toshikazu Ozaki, and Kazuhiro Hane
- 300) Reflection color filters of the three primary colors with wide viewing angles using common-thickness silicon subwavelength gratings. [Optics Express, **22** (21), (2014), 25663-25672]
 Yoshiaki Kanamori, Toshikazu Ozaki, and Kazuhiro Hane
- 301) Fabrication of single-crystal silicon nanowires based on surface wet adhesion. [Materials Letters, **152**, (2015), 94-97]
 Hoang Manh Chu, Minh Van Nguyen, Hung Ngoc Vu, Kazuhiro Hane
- 302) 高面精度共振型焦点可変ミラー. [電気学会論文誌 E(センサ・マイクロマシン部門誌), **135** (5), (2015), 165-170]
 中澤謙太、佐々木敬、羽根一博
- 303) Group velocity enhancement for guided lightwave by the band-pulling effect in single-mode silicon comb photonic crystal wires. [Journal of Optics, **17**, (2015), 055104-1-055104-9]
 Borriboon Thubthimthong and Kazuhiro Hane
- 304) Design, fabrication and optical characteristics of freestanding GaN waveguides on silicon substrate. [Journal of Vacuum Science & Technology B, **33** (3), (2015), 031207-1-031207-8]
 Takuji Sekiya, Takashi Sasaki, and Kazuhiro Hane
- 305) MEMS for Plasmon Control of Optical Metamaterials. [IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS, **21** (4), (2015), 2701410-1-2701410-10]
 Yoshiaki Kanamori, Ryohei Hokari, Kazuhiro Hane
- 306) Asymmetrically and Vertically Coupled Hybrid Si/GaN Microring Resonators for On-Chip Optical Interconnects. [IEEE Photonics Journal, **7** (4), (2015), 7801511-1-7801511-1-12]
 B. Thubthimthong, T. Sasaki, and K. Hane
- 307) Fabrication and Evaluation of Single-Crystal-Silicon Tunable Grating using Polymer-Based Membrane Transfer Bonding Process. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **135** (9), (2015), 361-366]
 Sawasdivorn Chernroj, Hisayuki Onuma, Tomohiro Suzuki, Takashi Sasaki, Hiroshi Mastuura, Kazuhiro Hane
- 308) THz 帯における電磁誘起透明化メタマテリアルの製作と透過率特性の評価. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **135** (11), (2015), 454-459]
 中村健太、穂苅遼平、金森義明、羽根一博
- 309) Detailed Characterization of Fano Resonance in Asymmetric-double-bar Metamaterials in the Optical Reson. [電気学会論文誌 E(センサ・マイクロマシン部門誌), **135** (11), (2015), 426-432]

Yuto Moritake, Yoshiaki Kanamori, Kazuhiro Hane

- 310) Enhanced quality factor of Fano resonance in optical metamaterials by manipulating configuration of unit cells. [Applied Physics Letters, **107** (21), (2015), 211108-1-211108-4]
Yuto Moritake, Yoshiaki Kanamori, and Kazuhiro Hane
- 311) シリコン機械振動子を用いたアコースティックエミッショセンサ. [電気学会論文誌 E(センサ・マイクロマシン部門誌), **135** (12), (2015), 484-489]
高田健伍、佐々木敬、西澤充智、齋藤寛、山崎慎介、松浦大輔、羽根一博
- 312) Suspended p-n Junction InGaN/GaN Multiple-Quantum-Well Device With Selectable Functionality. [IEEE Photonics Journal, **7** (6), (2015), 2701407-1-2701407-8]
Xin Li, Gangyi Zhu, Xumin Gao, Dan Bai, Xiaoming Huang, Xun Cao, Hongbo Zhu, Kazuhiro Hane, Yongjin Wang
- 313) AlN Nanowall Structures Grown on Si(111) Substrate by Molecular Beam Epitaxy. [Nanoscale Research Letters, **10**, (2015), 460-1-460-5]
Yosuke Tamura and Kazuhiro Hane
- 314) 金属ナノ共振器とシリコン導波路の集積化による光通信用減衰器の製作. [レーザ研究, **44** (1), (2016), 42-46]
金森義明、高橋大洋、羽根一博
- 315) Resonant Varifocal Micromirror with Piezoresistive Focus Sensor. [MICROMACHINES, **7** (4), (2016), 57-1-57-13]
Kenta Nakazawa, Takashi Sasaki, Hiromasa Furuta, Jiro Kamiya, Hideki Sasaki, Toshikazu Kamiya, Kazuhiro Hane
- 316) THz 帯におけるメタマテリアル・アブソーバの製作と吸収特性の評価. [電気学会論文誌 E(センサ・マイクロマシン部門誌), **136** (5), (2016), 172-179]
石井雄大, 瀧田佑馬, 金森義明, 南出泰亞, 羽根一博
- 317) Demonstration of sharp multiple Fano resonances in optical metamaterials. [Optics Express, **24** (9), (2016), 9332-9339]
Y. Moritake, Y. Kanamori, K. Hane
- 318) Optical characteristics of multiple layered InGaN quantum wells on GaN nanowalls grown on Si(111) substrate. [Materials Research Bulletin, **83**, (2016), 563-567]
Y. Tamura, K. Hane
- 319) Emission wavelength tuning of fluorescence by fine structural control of optical metamaterials with Fano resonance. [SCIENTIFIC REPORTS, **6**, (2016), 33208-1-33208-6]
Y. Moritake, Y. Kanamori, K. Hane
- 320) All-optical guided resonance tuning in hybrid GaN/Si microring induced by non-radiatively trapped injected hot electrons. [Optics Express, **24** (26), (2016), 29643-29658]
Borriboon Thubthimthong and Kazuhiro Hane
- 321) 25 nm Single-Crystal Silicon Nanowires Fabricated by Anisotropic Wet Etching. [Journal of Nanoscience and Nanotechnology, **17** (2), (2017), 1525-1529]
Hoang Manh Chu, Minh Van Nguyen, Hung Ngoc Vu, and Kazuhiro Hane
- 322) Varifocal Scanner Using Wafer Bonding. [Journal of Microelectromechanical Systems, **26** (2), (2017), 440-447]
Kenta Nakazawa, Takashi Sasaki, Hiromasa Furuta, Jiro Kamiya, Toshikazu Kamiya, and Kazuhiro Hane
- 323) Fabrication of Metamaterial Absorbers in THz Resion and Evaluation of the Absorption Characteristics. [Electronics and Communications in Japan, **100** (4), (2017), 15-24]
Yuta Ishii, Yuma Takida, Yoshiaki Kanamori, Hiroaki Minamide, and Kazuhiro Hane

- 324) Transmissive Plasmonic Color Filters with Built-in Si Photodiodes. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **137** (5), (2017), 134-139]
 Tomoki Shimizu, Hitoshi Sai, Yoshiaki Kanamori, Kazuhiro Hane
- 325) Polymer bonding of GaN crystal layer on silicon substrate for micro mechanical resonator applications. [Microsystem Technologies, **23**, (2017), 2891-2898]
 T. Sasaki, Y. Hayakawa, K. Hane
- 326) Scanning Micro-Mirror with an Electrostatic Spring for Compensation of Hard-Spring Nonlinearity. [MICRO-MACHINES, **8** (8), (2017), 240-1-240-13]
 Takashi Izawa, Takashi Sasaki, Kazuhiro Hane
- 327) Confocal laser displacement sensor using a micro-machined varifocal mirror. [Applied Optics, **56** (24), (2017), 6911-6916]
 Kenta Nakazawa, Takashi Sasaki, Hiromasa Furuta, Jiro Kamiya, Hideki Sasaki, Toshikazu Kamiya, and Kazuhiro Hane
- 328) Dynamic Spectral Control of Fano Resonance by MEMS Actuated Optical Metamaterials. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **137** (11), (2017), 357-362]
 Yuto Moritake, Yoshiaki Kanamori, and Kazuhiro Hane
- 329) 面外配置された非対称型ダブルバーメタマテリアルの製作と光学応答. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **137** (11), (2017), 363-370]
 大久保 藍, 金森 義明, 羽根 一博
- 330) プラズモニックカラーフィルタ一体型フォトダイオードアレイ. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **137** (11), (2017), 379-386]
 江間 大祐, 金森 義明, 斎 均, 羽根 一博
- 331) THz 波用 MEMS 駆動ワイヤグリッド偏光子の製作と光学特性評価. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **137** (11), (2017), 407-414]
 石井 雄大, 中田 陽介, 時実 悠, 瀧田 佑馬, 金森 義明, 南出 泰亜, 羽根 一博
- 332) 偏光無依存メタマテリアルを用いた屈折率センサ. [電気学会論文誌 E (センサ・マイクロマシン部門誌), **137** (11), (2017), 415-416]
 清水 友己, 金森 義明, 羽根 一博
- 333) Structure Shift of GaN Among Nanowall Network, Nanocolumn, and Compact Film Grown on Si (111) by MBE. [Nanoscale Research Letters, **13** (51), (2018), 51-1-51-7]
 Aihua Zhong, Ping Fan, Yuanting Zhong, Dongping Zhang, Fu Li, Jingting Luo, Yizhu Xie, Kazuhiro Hane
- 334) Electro-optic guided-mode resonance tuning suppressible by optically induced screening in a vertically coupled hybrid GaN/Si microring resonator. [Applied Physics Letters, **112**, (2018), 071102-1-071102-5]
 B. Thubthimthong, T. Sasaki, and K. Hane
- 335) Integrated H-2 nano-sensor array on GaN honeycomb nanonetwork fabricated by MEMS-based technology. [SENSORS AND ACTUATORS B-CHEMICAL, **3** (255), (2018), 2886-2893]
 Aihua Zhong, Takashi Sasaki, Ping Fan, Dongping Zhang, Jingting Luo, Kazuhiro Hane
- 336) GaN microring waveguide resonators bonded to silicon substrate by a two-step polymer process. [Applied Optics, **57** (9), (2018), 2073-2079]
 Ryohei Hashida, Takashi Sasaki, and Kazuhiro Hane
- 337) Wafer-level vacuum package of two-dimensional micro-scanner. [Microsystem Technologies, **24**, (2018), 2159-2168]
 Hoang Manh Chu, Takashi Sasaki, Kazuhiro Hane

- 338) Simple retinal imaging system using a MEMS scanning mirror. [Optical Engineering, **57** (9), (2018), 095101-1-095101-8]
Neelam Kaushik, Takashi Sasaki, Toru Nakazawa, Kazuhiro Hane
- 339) Miniature Spectroscopes with Two-Dimensional Guided-Mode Resonant Metal Grating Filters Integrated on a Photodiode Array. [Materials, **11**, (2018), 1924-1-1924-11]
Yoshiaki Kanamori, Daisuke Ema and Kazuhiro Hane
- 340) Silicon photonic microelectromechanical switch using lateral adiabatic waveguide couplers. [Optics Express, **26** (26), (2018), 33906-33917]
Takumi Nagai and Kazuhiro Hane
- 341) Tunable Hybrid Gap Surface Plasmon Polariton Waveguides with Ultralow Loss Deep-Subwavelength Propagation. [Plasmonics, **14**, (2019), 1751-1763]
Huong Thanh Nguyen, Son Ngoc Nguyen, Minh-Tuan Trinh, Kazuhiro Hane, Hoang Manh Chu
- 342) 偏光無依存メタマテリアルを用いた屈折率センサの製作と化学物質濃度計測及びDNA検出への適用. [電気学会論文誌E(センサ・マイクロマシン部門誌), **139** (7), (2019), 163-168]
金森義明、清水友己、野村慎一郎、羽根一博
- 343) MEMS-Based Wearable Eyeglasses for Eye Health Monitoring. [Biomedical Physics & Engineering Express, **6**, (2020), 015006-1-015006-8]
Neelam Kaushik, Takashi Sasaki, Yoshiki Takahashi, Toru Nakazawa, Kazuhiro Hane
- 344) High-speed and large-amplitude resonant varifocal mirror. [Journal of Robotics and Mechatronics, **32** (2), (2020), 344-350]
Takashi Sasaki, Takuro Kamada, Kazuhiro Hane

総説・解説記事

- 1) 光励起機械振動の光検出による非破壊検査. [レーザー研究, **16** (12), (1988), 51-57]
羽根一博, 服部秀三
- 2) フォトサーマル振動を利用した非破壊検査. [光学, **18** (1), (1989), 23-24]
羽根一博, 服部秀三
- 3) フォトサーマル振動の非破壊光計測への応用. [光学, **19** (2), (1990), 85-90]
羽根一博
- 4) Methods of Detecting a Reference Position by using diffraction and Interference of a Laser (共著). [The Review of Laser Engineering, **19** (9), (1991), 870-878]
Masafumi ITO, Kazuhiro HANE, Toshio GOTO
- 5) 光音響技術を用いたモアレ変位測定. [光学, **20** (3), (1991), 162-163]
羽根一博
- 6) 光アクチュエーターの可能性—光熱効果を中心として—. [光技術コンタクト, **30** (6), (1992), 327-333]
羽根一博
- 7) グレイティング応用計測技術—エンコーダーの観点より—. [O plus E, (9), (1995), 86-91]
羽根一博
- 8) ナノメートルからピコメートルへ—変位センサの高精度・高性能化. [精密工学会誌, **61** (12), (1995), 1666-1670]
羽根一博
- 9) ストロボ干渉顕微鏡：マイクロマシン計測に向けて. [光技術コンタクト, **35** (2), (1997), 46-52]
羽根一博, 大熊繫

- 10) メカトロニクスに用いられる回折格子エンコーダの動向. [自動化技術, **29** (6), (1997), 48-51]
羽根一博
- 11) 光マイクロマシン. [電学誌, **117** (12), (1997), 832-835]
羽根一博
- 12) 光モニター機能付きマイクロマシン光学部品. [O plus E, **20** (1), (1998), 50-56]
羽根一博, 佐々木実
- 13) 光マイクロマシンの物理. [光学, **27** (6), (1998), 306-311]
羽根一博
- 14) メカトロニクス用の新しいマイクロ光センサの開発. [OPTRONICS, (7), (1999), 156-160]
佐々木実, 羽根一博
- 15) マイクロマシニングによるメカトロニクス用フォトダイオードの開発. [電学論 E, **119** (8/9), (1999), 401-404]
羽根一博, 佐々木実
- 16) 透過型フォトダイオードによる変位計測. [応用物理, **69** (6), (2000), 680-683]
佐々木実, 羽根一博
- 17) 光通信用マイクロマシン 光スイッチ, 可変フィルタなどを中心に. [電気学会誌, **120** (11), (2000), 683-686]
羽根一博
- 18) マイクロマシニングによる光通信用部品の開発. [O plus E, **23** (2), (2001), 210-215]
羽根一博, 佐々木実
- 19) マイクロ・ナノ領域の光メカトロニクスの進展. [光アライアンス, (2001), 20-24]
羽根一博
- 20) 光 MEMS 技術が目ざす技術革新. [エレクトロニクス, (9), (2001), 30-33]
羽根一博
- 21) 高速原子ビームエッチングによるナノメートル無反射構造の作製. [O plus E, **24** (1), (2002), 53-59]
金森義明, 羽根一博
- 22) 光通信用 MEMS の進展. [日本機械学会誌, **105** (998), (2002), 100-103]
羽根一博
- 23) 光ファイバー先端に形成したマイクロレンズ. [O plus E, **24** (7), (2002), 724-728]
佐々木実, 羽根一博
- 24) 光 MEMS 技術の最新動向 光スイッチ、光スキャナ、光センサ. [クリーンテクノロジー, (2002), 9-12]
羽根一博
- 25) ミラースキャナ. [計測と制御, **41** (9), (2002), 687-688]
羽根一博
- 26) 光クロスコネクト用マイクロミラー. [光学, **32** (1), (2003), 16-21]
羽根一博
- 27) 光でつくるマイクロ・ナノ機械：光リソグラフィによる立体加工. [光技術コンタクト, **41** (6), (2003), 340-346]
羽根一博, 佐々木実, 金森義明
- 28) MEMS 技術による光学システムの集積化 =集積化を目指した MEMS と光学システムの組み合わせについて=. [光アライアンス, **15** (6), (2004), 1-5]
佐々木実, 羽根一博, 金森義明

- 29) 光学系一体型の近接場光プローブ. [光アライアンス, (6), (2005), 48-51]
羽根一博, 佐々木実
- 30) サブ波長格子：バイオミメティック構造からフォトニックデバイスへ. [応用物理, 74 (7), (2005), 935-938]
金森義明, 羽根一博
- 31) 光 MEMS の記録システムへの応用. [日本応用磁気学学会誌, 29 (11), (2005), 970-975]
羽根一博
- 32) 高機能マイクロミラーデバイス = 小型かつ付加価値の高いミラーデバイスへの試み =. [光アライアンス, (11), (2005), 1-5]
佐々木実, 羽根一博
- 33) MEMS アクチュエータによる周期可変共鳴格子. [OPTRONICS, 24 (288), (2005), 71-76]
金森義明, 羽根一博
- 34) MEMS プロセスと LSI プロセスの類似点と相違点. [クリーンテクノロジー, (2), (2006), 37-40]
羽根一博
- 35) 光通信デバイスのための MEMS. [光技術コンタクト, 45 (3), (2007), 120-125]
羽根一博, 佐々木実, 金森義明
- 36) エンコーダの光学と集積化. [電気学会論文誌 E, 127 (9), (2007), 391-396]
羽根一博
- 37) 高密度プラズマの光マイクロマシンへの応用. [精密工学会誌, 73 (9), (2007), 980-983]
羽根一博, 佐々木実, 金森義明
- 38) シリコン光 MEMS. [OPTRONICS, (11), (2007), 159-163]
羽根一博, 金森義明
- 39) 実用的な光マイクロマシン，将来の光ナノマシン. [OPTRONICS, (7), (2008), 136-138]
羽根一博
- 40) 光信用ナノマシン. [OPTRONICS, 27 (319), (2008), 153-158]
羽根一博, 金森義明, 高橋一法
- 41) 光 MEMS の新展開. [光アライアンス, (2010), 1-4]
羽根一博
- 42) MEMS 可動型シリコン細線カプラー導波路スイッチ. [光技術コンタクト, 49 (8), (2011), 4-8]
羽根一博, 金森義明, 池田太郎, 秋浜祐太
- 43) 超小型アクチュエータを用いた光導波路カプラスイッチ. [日本機械学会誌, 115 (1128), (2012), 40-40]
羽根一博
- 44) 実用化が進む MEMS マイクロミラー. [日本機械学会誌, 116 (1130), (2013), 43-46]
羽根一博, 佐々木敬
- 45) 超低消費電力シリコン光導波路スイッチ. [ケミカルエンジニアリング, (2015), 16-20]
羽根一博
- 46) MEMS ミラーを用いた共焦点センサー. [OPTRONICS, (2), (2016), 62-66]
佐々木敬, 羽根一博
- 47) MEMS ミラーの研究と光センサへの応用. [光アライアンス, 27 (9), (2016), 38-42]
佐々木敬, 羽根一博

- 48) 自動車用 MEMS 光スキャナの研究動向. [自動車技術, 71, (2017), 18-23]
羽根一博
- 49) 車載用 MEMS 光スキャナの基礎と研究開発状況. [車載テクノロジー, 4 (6), (2017), 71-74]
羽根一博
- 50) 自動運転用光センサのための MEMS スキャナの研究動向と設計方針. [OPTRONICS, (5), (2018), 73-77]
羽根一博
- 51) LiDAR のレーザー走査用 MEMS ミラーの最新技術：ラスターおよび全方向スキャナの設計から試作まで. [光技術コンタクト, 58 (678), (2020), 38-44]
羽根一博, 佐々木敬