

Paper List

January–December, 2018

- E2018-1(C) High-speed multi-bandpass liquid-crystal filter using dual-frequency liquid crystal for real-time spectral imaging system
SPIE PHOTONICS WEST, p.10555-29, San Francisco, January 2018.
Takahiro Ishinabe, Kohei Terashima, Kazuhiro Wako, Yasuyuki Fujihara, Yusuke Aoyagi, Maasa Murata, Satoshi Nasuno, Shunichi Wakashima, Rihito Kuroda, Yosei Shibata, Shigetoshi Sugawa, Hideo Fujikake
- E2018-2(C) A Preliminary Chip Evaluation toward Over 50Mfps Burst Global Shutter Stacked CMOS Image Sensor
Electronic Imaging, IMSE-398, San Francisco, January 2018.
Manabu Suzuki, Masashi Suzuki, Rihito Kuroda, Shigetoshi Sugawa
<https://doi.org/10.2352/ISSN.2470-1173.2018.11.IMSE-398>
- E2018-3(F) Effect of drain current on appearance probability and amplitude of random telegraph noise in low-noise CMOS image sensors
Japanese Journal of Applied Physics, Vol.57, No.4S, 04FF08, March 2018.
Shinya Ichino, Takezo Mawaki, Akinobu Teramoto, Rihito Kuroda, Hyeonwoo Park, Shunichi Wakashima, Tetsuya Goto, Tomoyuki Suwa and Shigetoshi Sugawa
<https://doi.org/10.7567/JJAP.57.04FF08>
- E2018-4(F) Experimental investigation of localized stress-induced leakage current distribution in gate dielectrics using array test circuit
Japanese Journal of Applied Physics, Vol.57, No.4S, 04FE11, March 2018.
Hyeonwoo Park, Akinobu Teramoto, Rihito Kuroda, Tomoyuki Suwa and Shigetoshi Sugawa
<https://doi.org/10.7567/JJAP.57.04FE11>
- E2018-5(C) Reliability of MgO in Magnetic Tunnel Junctions Formed by MgO Sputtering and Mg Oxidation
IEEE International Reliability Physics Symposium, pp. P-GD.4_1-6., San Francisco, 2018.
A. Teramoto, K. Hashimoto, T. Suwa, J. Tsuchimoto, M. Hayashi, H. Park, and S. Sugawa
<https://doi.org/10.1109/IRPS.2018.8353664>

- E2018-6(F) Monte Carlo Simulation of Nanowires Array Biosensor with AC Electroosmosis
IEEE Transactions on Electron Devices, Vol.65, No.5, pp.1932-1938, May 2018.
Che-An Lee, Akinobu Teramoto, and Hiroshi Watanabe
<https://doi.org/10.1109/TED.2018.2812783>
- E2018-7(C) Design and Application of Inovative Multi-Table and Bond Head Drive System on Thermal Compression Bonber with UPH over 2000
2018 IEEE 68th Electronic Components and Technology Conference, pp.392-400, San Diego May 2018.
Kohei Seyama, Shoji Wada, Yuji Eguchi, Tomonori Nakamura, Doug Day, Shigetoshi Sugawa
- E2018-8(F) Impacts of Random Telegraph Noise with Various Time Constants and Number of States in Temporal Noise of CMOS Image Sensors
ITE Transactions on Media Technology and Applications, Vol.6, No.3, pp.171-179, July 2018.
Rihito Kuroda, Akinobu Teramoto, Shigetoshi Sugawa
- E2018-9(F) Statistical Analyses of Random Telegraph Noise in LTPS Thin-Film Transistors Fabricated Using New Selective Laser Annealing System Pixel Source Follower with Various Gate Shapes in CMOS Image Sensor
ITE Transactions on Media Technology and Applications, Vol.6, No.3, pp.163-170, July 2018.
Shinya Ichino, Takezo Mawaki, Akinobu Teramoto, Rihito Kuroda, Shunichi Wakashima, Tomoyuki Suwa, Shigetoshi Sugawa
- E2018-10(C) Properties of Poly-Si Thin Films and Their Transistors Fabricated Using Selective Excimer Laser Annealing
THE 25th INTERNATIONAL WORKSHOP ON ACTIVE-MATRIX FLATPANEL DISPLAYS AND DEVICES(AM-FPD18), P-22, July 2018.
Tetsuya Goto, Kaori Saito, Fuminobu Imaizumi, Makoto Hatanaka, Masami Takimoto, Michinobu Mizumura, Jun Gotoh, Hiroshi Ikenoue, Kazuo Udagawa, Junji Kido and Sshigetoshi Sugawa
- E2018-11(C) Characterization of Excimer-Laser Doping of a Poly-Si Thin Film with a Phosphoric-Acid Coating for Thin-Film-Transistor Fabrication
THE 25th INTERNATIONAL WORKSHOP ON ACTIVE-MATRIX FLATPANEL DISPLAYS AND DEVICES(AM-FPD18), P-L4, July 2018.
Kaname Imokawa, Nozomu Tanaka, Akira Suwa, Daisuke Nakamura, Taizoh Sadoh, Tetsuya Goto, and Hiroshi Ikenoue

- E2018-12(F) LTPS Thin-Film Transistors Fabricated Using New Selective Laser Annealing System
IEEE Transactions on Electron Devices, Vol.65, No.8, pp.3250-3256, August 2018.
Tetsuya Goto, Kaori Saito, Fuminobu Imaizumi, Makoto Hatanaka, Masami Takimoto, Michinobu Mizumura, Jun Gotoh, Hiroshi Ikenoue, and Shigetoshi Sugawa
<https://doi.org/10.1109/TED.2018.2846412>
- E2018-13(C) Impact of atomically flat SiO₂/Si interface on improvement of MOS device performance
European Advanced Materials Congress, p.204, Stockholm, Sweden, August 2018.
Akinobu Teramoto, Tomoyuki Suwa, Rihito Kuroda, and Shigetoshi Sugawa
- E2018-14(C) High Sensitivity Compact Gas Concentration Sensor with Heating Function for High Precision Trimethyl Aluminum Gas Supply System
Extended Abstracts of the 2018 International Conference on Solid State Devices and Materials, J-6-02, pp.587-588, Tokyo, September 2018.
Hidekazu Ishii, Masaaki Nagase, Nobukazu Ikeda, Yoshinobu Shiba, Yasuyuki Shirai, Rihito Kuroda, and Shigetoshi Sugawa
- E2018-15(C) A 125Mfps Global Shutter CMOS Image Sensor with Burst Correlated Double Sampling during Photo-Electrons Collection
Extended Abstracts of the 2018 International Conference on Solid State Devices and Materials, J-6-05, pp.593-594, Tokyo, September 2018.
Manabu Suzuki, Rihito Kuroda, and Shigetoshi Sugawa
- E2018-16(C) Dual Pixel Reset Voltage CMOS Image Sensor For High SNR Ultraviolet Light Absorption Spectral Imaging
Extended Abstracts of the 2018 International Conference on Solid State Devices and Materials, J-6-06, pp.595-596, Tokyo, September 2018.
Yusuke Aoyagi, Yasuyuki Fujihara, Maasa Murata, Hiroya Shike, Rihito Kuroda, and Shigetoshi Sugawa
- E2018-17(C) Improved Conductance Method for Interface Trap Density of ZrO₂-Si interface
Extended Abstracts of the 2018 International Conference on Solid State Devices and Materials, PS-1-21, pp.865-866, Tokyo, September 2018.
Hsin Jyun Lin, Akinobu Teramoto, Hiroshi Watanabe, Rihito Kurota, Kota Umezawa, Kiichi Furukawa, and Shigetoshi Sugawa
- E2018-18(C) Impacts of Boron Concentration and Annealing Temperature on Electrical Characteristics of CoFeB/MgO/CoFeB Magnetic Tunnel Junction
Extended Abstracts of the 2018 International Conference on Solid State Devices and Materials, PS-2-10, pp. 905-906, Tokyo, September 2018.
Hyeonwoo Park, Akinobu Teramoto, Jun-ichi Tsuchimoto, Marie Hayashi, Keiichi Hashimoto, Rihito Kuroda, and Shigetoshi Sugawa

- E2018-19(C) [Invited Paper] High Speed Global Shutter CMOS Image Sensors toward Over 100Mfps
Ultrafast imaging and particle tracking instrumentation and methods
2018(ULITIMA2018), September 2018.
Rihito Kuroda, Manabu Suzuki and Shigetoshi Sugawa
- E2018-20(F) Corrosion resistance of sintered SiC against fluorinated plasmas
Journal of Vacuum Science & Technology A, Volume36, Issue 6, 061404,
October 2018.
Tetsuya Goto, Michito Miyahara, Masaru Sasaki, and Shigetoshi Sugawa
<https://doi.org/10.1116/1.5046792>
- E2018-21(C) Impact of CoFeB Surface Roughness on Reliability of MgO Films in
CoFeB/MgO/CoFeB Magnetic Tunnel Junction
14th International Conference on Atomically Controlled Surfaces, Interfaces
and Nanostructures in conjunction with 26th International Colloquium on
Scanning Probe Microscopy (ACSIN-14 & ICSPM26), pp.20, Sendai, October
2018.
Hyeonwoo Park, Akinobu Teramoto, Jun-ichi Tsuchimoto, Marie Hayashi,
Keiichi Hashimoto, and Shigetoshi Sugawa
- E2018-22(C) Corrosion Resistance to F and Cl plasma of Yttrium Oxyfluoride (YOF)
formed by Sintering
AVS 65th International Symposium, PS+AS+EM+SS-MoM-3, Long Beach,
October, 2018.
Akinobu Teramoto, Yoshinobu Shiba, Tetsuya Goto, Yukio Kishi, Shigetoshi
Sugawa
- E2018-23(C) Silicon Nitride Film Formations Using Magnetic-Mirror Confined New Plasma
Source
AVS 65th International Symposium, PS-ThM, Long Beach, October, 2018.
Tetsuya Goto, S. K. Kobayashi and Shigetoshi Sugawa
- E2018-24(C) Effects of Process Gases and Gate TiN Electrode during the Post Deposition
Anneal to ALD-Al₂O₃ Dielectric Film
AVS 65th International Symposium, TF+EM+MI-WeM-5, Long Beach,
October 2018.
Masaya Saito, Akinobu Teramoto, Tomoyuki Suwa, Kenshi Nagumo,
Yoshinobu Shiba, Rihito Kuroda, Shigetoshi Sugawa
- E2018-25(C) [Invited] ESR Spin-Trapping Study on Microbubble Treated Water- Restart of
Collapsing Process of Stabilized Bulk Nanobubbles–
2018 International Conference on Nanobubbles, Nanodroplets and their
Applications, S5_01, Suzhou, October 2018.
Masayoshi Takahashi
- E2018-26(C) An Electrical Impedance Biosensor Array for Tracking Moving Cells
IEEE SENSORS 2018, 1298, New Delhi, October 2018.
Norichika Ogata, Akihisa Shina, Takayuki Komiya, Yoji Iizuka, Ken Matsuse,
Fuminobu Imaizumi, Tomoyuki Suwa, and Akinobu Teramoto
<https://doi.org/10.1109/ICSENS.2018.8589577>

- E2018-27(F) Anodic oxidization of Al-Y amorphous alloy ribbons and their capacitive properties
Journal of Alloys and Compounds, Vol.776, pp.757-762, available online on October 2018.
Mikio Fukuhara, Tomoyuki Kuroda, Fumihiko Hasegawa, Yasuyuki Shirai, Toshiyuki Hashida, Kazuya Konno
<https://doi.org/10.1016/j.jallcom.2018.10.346>
- E2018-28(F) [Keynote] Over 100Mfps high speed global shutter CMOS image sensor
32nd International Congress on High-Speed Imaging and Photonics, p.27, Netherland, October 2018.
Rihito Kuroda, Manabu Suzuki and Shigetoshi Sugawa
- E2018-29(C) [Invited] RTS noise characterization and suppression for advanced
Proceedings of the invited talks, 4th International Workshop on Image Sensors and Imaging Systems (IWISS2018), pp.12-13, November 2018.
Rihito Kuroda, Shinya Ichino, Takezo Mawaki, Tomoyuki Suwa, Akinobu Teramoto, and Shigetoshi Sugawa
- E2018-30(W) A Study of Gate Insulator Reliability due to Localized Defects Using Large Scale Array Test Circuit
The 30th International Microelectronics Conference, pp.27-34, Sendai, November 2018.
Hyeonwoo Park, Akinobu Teramoto, Rihito Kuroda, Tomoyuki Suwa, Tetsuya Goto, Hayato Suzuki, and Shigetoshi Sugawa
- E2018-31 (F) Oxygen and air nanobubbles in water inhibit proliferation of dental follicle stem cells in vitro
Journal of Dental Health, Oral Disorders & Therapy, Vol.9, Issue6, pp. 460-462, November 2018.
Atsushi Oishi, Hitoyata Shimokawa, Eri Sakaniwa, Masayoshi Takahashi, Michiyo Miyashin, Shinichi Arakawa
- E2018-32 (L) Statistical Analysis of Threshold Voltage Variation Using MOSFETs With Asymmetric Source and Drain
IEEE Electron Device Letters, Vol.39, No.12, pp. 1836-1839, December 2018.
Shinya Ichino, Akinobu Teramoto, Rihito Kuroda, Takezo Mawaki, Tomoyuki Suwa, Shigetoshi Sugawa
<https://doi.org/10.1109/LED.2018.2874012>
- E2018-33 (C) A CMOS Proximity Capacitance Image Sensor with 16 μ m Pixel Pitch, 0.1aF Detection Accuracy and 60 Frames Per Second
IEEE International Electron Devices Meeting, San Francisco, pp.660-663, December 2018.
M. Yamamoto, R. Kuroda, M. Suzuki, T. Goto, H. Hamori, S. Murakami, T. Yasuda and S. Sugawa
<https://doi.org/10.1109/IEDM.2018.8614636>

E2018-34(C) A 24.3Me- Full Well Capacity CMOS Image Sensor with Lateral Overflow Integration Trench Capacitor for High Precision Near Infrared Absorption Imaging
IEEE International Electron Devices Meeting, San Francisco, pp.225-228, December 2018.
M. Murata, R. Kuroda, Y. Fujihara, Y. Aoyagi, H. Shibata, T. Shibaguchi, Y. Kamata, N. Miura, N. Kuriyama and S. Sugawa
<https://doi.org/10.1109/IEDM.2018.8614590>