Paper List

January – December, 2020

E2020-1(F) Study on CF4/O2 plasma resistance of O-ring elastomer materials
Tetsuya Goto, Shogo Obara, Tomoya Shimizu, Tsuyoshi Inagaki, Yasuyuki Shirai, and Shigetoshi Sugawa
https://doi.org/10.1116/1.5124533

E2020-2(F) Fabrication of CMOS Inverters in Si Thin-Film-Transistors by Laser Doping
Using a Chemical Solution Coating
Kaname Imokawa, Takayuki Kurashige, Akira Šuwa, Daisuke Nakamura,
Taizoh Sadoh, Tetsuya Goto, and Hiroshi Ikenoue
http://doi.org/10.1109/JEDS.2019.2956991

E2020-3(C) Surface flattening of poly-Si thin films by laser annealing and electrical
properties of LTPS-TFTs
Proceedings of SPIE, 11268, Laser-based Micro- and Nanoprocessing XIV;
1126810 (2020).
Fuminobu Hamano, Akira Mizutani, Kaname Imokawa, Daisuke Nakamura,
Tetsuya Goto, Hiroshi Ikenoue
https://doi.org/10.1117/12.2544910

E2020-4(C) An over 120dB dynamic range linear response single exposure CMOS image
sensor with two-stage lateral overflow integration trench capacitors
Electronic Imaging 2020, Imaging Sensors and Systems 2020, (2020), 143-1 -
143-5,
Yasuyuki Fujihara, Maasa Murata, Shota Nakayama, Rihito Kuroda, Shigetoshi Sugawa
https://doi.org/10.2352/ISSN.2470-1173.2020.7.ISS-143

E2020-5(L) Amorphous titanium-oxide supercapacitors with high capacitance
A Letters Journal Exporing the Frontiers of Physics, 128, Number 5, (2020),
58001-p1-p5.
Mikio Fukuhara, Tomoyuki Kuroda, Fumihiko Hasegawa, Yasuyuki Shirai,
Tomoyuki Suwa, Toshiyuki Hashida and Masahiko Nishijima
http://doi.org/10.1209/0295-5075/128/58001

E2020-6(F) Over 100 Million Frames per Second 368 Frames Global Shutter Burst CMOS
Image Sensor with Pixel-wise Trench Capacitor Memory Array
Sensors (MDPI), 20, No.4, (2020), pp.16.
Manabu Suzuki, Yuki Sugama, Rihito Kuroda and Shigetoshi Sugawa
https://doi.org/10.3390/s20041086
E2020-7(F)  High reliability CoFeB/MgO/CoFeB magnetic tunnel junction fabrication using low-damage ion beam etching  
Hyeonwoo Park, Akinobu Teramoto, Jun-ichi Tsuchimoto, Keiichi Hashimoto, Tomoyuki Suwa, Marie Hayashi, Rihito Kuroda, Koji Tsunekawa, and Shigetoshi Sugawa  
https://doi.org/10.35848/1347-4065/ab6cb5

E2020-8(F)  A high-precision 1 Ω–10 MΩ range resistance measurement platform for statistical evaluation of emerging memory materials  
Takeru Maeda, Yuya Omura, Rihito Kuroda, Akinobu Teramoto, and Shigetoshi Sugawa  
http://doi.org/10.35848/1347-4065/ab6d86

E2020-9(F)  A High Near-Infrared Sensitivity Over 70-dB SNR CMOS Image Sensor with Lateral Overflow Integration Trench Capacitor  
IEEE TRANSACTIONS ON ELECTRON DEVICES, 67, No.4, (2020), pp. 1653-1659  
Maasa Murata, Rihito Kuroda, Yasuyuki Fujihara, Yusuke Otsuka, Hiroshi Shibata, Taku Shibaguchi, Yutaka Kamata, Noriyuki Miura, Naoya Kuriyama, Shigetoshi Sugawa  
https://doi.org/10.1109/TED.2020.2975602

E2020-10(F)  Resistance Measurement Platform for Statistical Analysis of Emerging Memory Materials  
Takeru Maeda, Yuya Omura, Rihito Kuroda, Akinobu Teramoto, Tomoyuki Suwa, and Shigetoshi Sugawa  
https://doi.org/10.1109/TSM.2020.2983100

E2020-11(P)  Study on Influence of O2 Concentration in Wafer Cleaning Ambient for Smoothness of Silicon (110) Surface Appearing at Sidewall of Three-Dimensional Transistors  
Tomoyuki Suwa, Akinobu Teramoto, Yasuyuki Shirai, Takenobu Matsuo, Nobutaka Mizutani and Shigetoshi Sugawa  
https://doi.org/10.1149/09703.0023ecst

E2020-12(F)  Control of ion-flux and ion-energy in direct inductively coupled plasma reactor for interfacial-mixing plasma-enhanced atomic layer deposition  
Masaki Hirayama, Akinobu Teramoto, and Shigetoshi Sugawa  
https://doi.org/10.1116/6.0000021
E2020-13(F) Influence of silicon wafer surface roughness on semiconductor device characteristics
Keiichiro Mori, Shuichi Samata, Noritomo Mitsugi, Akinobu Teramoto, Rihito Kuroda, Tomoyuki Suwa, Keiichi Hashimoto, and Shigetoshi Sugawa
https://doi.org/10.35848/1347-4065/ab918c

E2020-14(F) Plasma resistance of sintered and ion-plated yttrium oxyfluorides with various Y, O, and F composition ratios for use in plasma process chamber
Journal of Vacuum Science & Technology A, 38, (2020), 043003-1 - 043003-9,
Tetsuya Goto, Yoshinobu Shiba, Akinobu Teramoto, Yukio Kishi, and Shigetoshi Sugawa
https://doi.org/10.1116/1.5142515

E2020-15(C) Effect of Drain-to-Source Voltage on Random Telegraph Noise Based on Statistical Analysis of MOSFETs with Various Gate Shapes
http://doi.org/10.1109/IRPS45951.2020.9128341

E2020-16(F) Preserved Color Pixel: high-resolution and high-colorfidelity image acquisition using single image sensor with sub-half-micron pixels
Yuichiro Yamashita, Rihito Kuroda, and Shigetoshi Sugawa
https://doi.org/10.3169/mta.8.161

E2020-17(F) Low-energy high-flux ion bombardment-induced interfacial mixing during Al2O3 plasma-enhanced atomic layer deposition
Masaki Hirayama, and Shigetoshi Sugawa
https://doi.org/10.1116/6.0000388

E2020-18(W) CMOS FOR AUTOMOTIVE, MEDICAL, AND INDUSTRIAL APPLICATIONS
IS&T SEMINAR SERIES Best Student Research, (2020), Virtual Conference
Yasuyuki Fujihara
https://doi.org/10.2352/ISSN.2470-1173.2020.7.ISS-143

E2020-19(C) Over 230 fF/μm2 capacitance density 9.0V breakdown voltage textured deep trench SiN capacitors toward 3D integration
Koga Saito, Ayano Yoshida, Rihito Kuroda, Hiroshi Shibata, Taku Shibaguchi, Naoya Kuriyama and Shigetoshi Sugawa
E2020-20(W)  A Study on High Full Well Capacity Wide Dynamic Range Wide Spectral Response CMOS Image Sensor and its Applications
Yasuyuki Fujihara, Maasa Murata, Shota Nakayama, Rihito Kuroda, and Shigetoshi Sugawa

E2020-21(C)  Improvement of the Surface Roughness of LTPS Thin Films with Additional Laser Irradiation
The 27th International Display Workshops, (2020), FMCp3-7, Virtual Conference.
Fuminobu Hamano, Akira Mizutani, Kaname Imokawa, Daisuke Nakamura, Tetsuya Goto, Hiroshi Ikenoue

E2020-22(C)  A Global Shutter Wide Dynamic Range Soft X-ray CMOS Image Sensor with BSI Pinned Photodiode, Two-stage LOFIC and Voltage Domain Memory Bank