

Paper List

January – December, 2021

- E2021-1(F) Modification of copper and copper oxide surface states due to isopropyl alcohol treatment toward area-selective processes
Journal of Vacuum Science & Technology A, 39, (2021), 013403-1-013403-10,
Takezo Mawaki, Akinobu Teramoto, Katsutoshi Ishii, Yoshinobu Shiba, Rihito Kuroda, Tomoyuki Suwa, Shuji Azumo, Akira Shimizu, Kota Umezawa, Yasuyuki Shirai, and Shigetoshi Sugawa
<https://doi.org/10.1116/6.0000618>
- E2021-2(F) An Over 120 dB Single Exposure Wide Dynamic Range CMOS Image Sensor With Two-Stage Lateral Overflow Integration Capacitor
IEEE Transactions on Electron Devices, 68, Issue1, pp.152-157, (2021).
Yasuyuki Fujihara, Maasa Murata, Shota Nakayama, Rihito Kuroda, Shigetoshi Sugawa
<http://doi.org/10.1109/TED.2020.3038621>
- E2021-3(C) A Proposal of Analog Correlated Multiple Sampling with High Density Capacitors for Low Noise CMOS Image Sensors
Electronic Imaging 2021, Imaging Sensors and Systems 2021, Society for Imaging Science and Technology, Online, (2021).
Shunta Kamoshita, Manabu Suzuki, Rihito Kuroda, Shigetoshi Sugawa
- E2021-4(C) Estimation of the mobility of low temperature polycrystalline silicon thin film transistors through deep learning
Proceedings of SPIE, vol.11673, Laser Applications in Microelectronic and Optoelectronic Manufacturing (LAMOM) XXVI; 1167306 (2021)
Akira Mizutani, Fuminobu Hamano, Keita Katayama, Daisuke Nakamura, Tetsuya Goto, Hiroshi Ikenoue
- E2021-5(F) A Global Shutter Wide Dynamic Range Soft X-Ray CMOS Image Sensor With Backside- Illuminated Pinned Photodiode, Two-Stage Lateral Overflow Integration Capacitor, and Voltage Domain Memory Bank
IEEE Transactions on Electron Devices, 68, Issue4, (2021), pp.2056-2063.
Hiroya Shike, Rihito Kuroda, Ryota Kobayashi, Maasa Murata, Yasuyuki Fujihara, Manabu Suzuki, Shoma Harada, Taku Shibaguchi, Naoya Kuriyama, Takaki Hatsui, Jun Miyawaki, Tetsuo Harada, Yuichi Yamasaki, Takeo Watanabe, Yoshihisa Harada, and Shigetoshi Sugawa
<http://doi.org/10.1109/TED.2021.3062576>

- E2021-6(F) High capacitance density highly reliable textured deep trench SiN capacitors toward 3D integration
Japanese Journal of Applied Physics, 60, No. SBBC06, (2021), pp.1-7
Koga Saito, Ayano Yoshida, Rihito Kuroda, Hiroshi Shibata, Taku Shibaguchi, Naoya Kuriyama, and Shigetoshi Sugawa
<https://doi.org/10.35848/1347-4065/abec5f>
- E2021-7(C) Analysis of Reaction and Decomposition of Isopropyl Alcohol on Copper and Copper Oxide Surfaces Toward Area-selective Processes
5th Area-Selective Deposition Workshop (ASD 2021), Session3-4, pp.1, Online, April 6, 2021
Takezo Mawaki, Akinobu Teramoto, Katsutoshi Ishii, Yoshinobu Shiba, Tomoyuki Suwa, Shuji Azumo, Akira Shimizu, Kota Umezawa, Rihito Kuroda, Yasuyuki Shirai, Shigetoshi Sugawa
- E2021-8(F) Free-Radical Generation from Bulk Nanobubbles in Aqueous Electrolyte Solutions: ESR Spin-Trap Observation of Microbubble-Treated Water
Langmuir, 37, 16, (2021), pp.5005–5011.
Masayoshi Takahashi, Yasuyuki Shirai, and Shigetoshi Sugawa
<https://doi.org/10.1021/acs.langmuir.1c00469>
- E2021-9(F) [Invite Paper] High Accuracy High Spatial Resolution and Real-Time CMOS Proximity Capacitance Image Sensor Technology and its Applications
ITE Transactions on Media Technology and Applications, 9, No.2, (2021), pp.122-127
Rihito Kuroda, Masahiro Yamamoto, Yuki Sugama, Yoshiaki Watanabe, Manabu Suzuki, Tetsuya Goto, Toshiro Yasuda, Shinichi Murakami, Yayoi Yokomichi, Hiroshi Hamori, Shigetoshi Sugawa
<https://doi.org/10.3169/mta.9.122>
- E2021-10(F) Impact on the Conductance Method of the Asymmetry in the AC Response Induced by Interface Trap Levels
ECS Journal of Solid State Science and Technology, 10, Number 4, 043004, (2021), April 20, 2021
Hsin-Jyun Lin, Hiroshi Watanabe, Akinobu Teramoto, Rihito Kuroda, Kota Umezawa, Kiichi Furukawa and Shigetoshi Sugawa
<https://doi.org/10.1149/2162-8777/abe8b5>
- E2021-11(F) Size Effects of Poly-Si Formed by Laser Annealing With Periodic Intensity Distribution on the TFT Characteristics
IEEE Journal of the Electron Devices Society, 9, (2021), pp.679-686, 06 July 2021
Akira Mizutani, Fuminobu Hamano, Daisuke Nakamura, Tetsuya Goto, Siti Rahmah Aid, and Hiroshi Ikenoue
<https://doi.org/10.1109/JEDS.2021.3094795>

- E2021-12(F) A high-precision current measurement platform applied for statistical measurement of discharge current transient spectroscopy of traps in SiN dielectrics
Japanese Journal of Applied Physics, 60, Number 8, (2021), 086501, 27 July 2021
Koga Saito, Hayato Suzuki, Hyeonwoo Park, Rihito Kuroda, Akinobu Teramoto, Tomoyuki Suwa and Shigetoshi Sugawa
<https://doi.org/10.35848/1347-4065/ac1215>
- E2021-13(C) High-precision CMOS Proximity Capacitance Image Sensors with Large-format 12 μm and High-resolution 2.8 μm Pixels
International Image Sensor Workshop (IISW), pp.288-291, (2021), Online, 23 September 2021
Yuki Sugama, Yoshiaki Watanabe, Rihito Kuroda, Masahiro Yamamoto, Tetsuya Goto, Toshiro Yasuda, Shinichi Murakami, Hiroshi Hamori, Naoya Kuriyama, and Shigetoshi Sugawa
- E2021-14(C) A 1000fps High SNR Voltage-domain Global Shutter CMOS Image Sensor with Two-stage LOFIC for In-Situ Fluid Concentration Distribution Measurements
International Image Sensor Workshop (IISW), pp.258-261, (2021), Online, 23 September 2021
Tetsu Oikawa, Rihito Kuroda, Keigo Takahashi, Yoshinobu Shiba, Yasuyuki Fujihara, Hiroya Shike, Maasa Murata, Chia-Chi Kuo, Yhang Ricardo Sipauba Carvalho da Silva, Tetsuya Goto, Tomoyuki Suwa, Tatsuo Morimoto, Yasuyuki Shirai, Masaaki Nagase, Nobukazu Ikeda, Shigetoshi Sugawa
- E2021-15(C) Array of GaN micro-LED chips and monocrystal Si CMOS pixel circuit chips mounted on flexible substrate
The 28th International Display Workshops, (2021), FMC2-4L, Virtual Conference, Dec.2, 2021.
Tetsuya Goto, Takeshi Okuno, Yoshikazu Suzuki, Koichi Kajiyama, Yoshihiko Muramoto, Shigetoshi Sugawa
- E2021-16(C) [Invited]Sub-aF Detection Accuracy CMOS Proximity Capacitance Image Sensors for Inspection, Authentication and More
The 28th International Display Workshops, (2021), INP5-1, Virtual Conference, Dec.2, 2021.
Rihito Kuroda, Yuki Sugama, Yoshiaki Watanabe, Tetsuya Goto, Toshiro Yasuda, Shinichi Murakami, Hiroshi Hamori, Shigetoshi Sugawa
- E2021-17(C) High Resolution Array Tester for Flat Panel Display Using Proximity Capacitance Image Sensor
The 28th International Display Workshops, (2021), FMC7/AIS9-4, Virtual Conference, Dec.3, 2021.
Toshiro Yasuda, Kazuhisa Kobayashi, Yuichi Yamamoto, Hiroshi Hamori, Akinobu Teramoto, Rihito Kuroda, Shigetoshi Sugawa