

Publication List

A. Journal (Impact Factor / Ranking Factor)

- 1 **Ya-Hsiang Tai***, Chih-Chung Tu*, Yi-Cheng Yuan, Hsu-En Tsai, Bo-Wei Liou, Che-Yu Lai, and Hsueh-Shih Chen, "Lead Sulfide Quantum Dots as the Semiconductor Layer in Thin-Film Phototransistors for Infrared Thermal Image Sensing", *Journal of Solid State Science and Technology*, Accepted online, December 2024.
- 2 **Ya-Hsiang Tai**, Yi-Cheng Yuan, and Cheng-Hsueh Hsieh, "Implementation of correlated double sampling circuit on glass applied for active pixel sensing array," *Journal of the Society for Information Display*, VOL. 30, NO.10, PP. 758-764, 2022.
- 3 **Ya-Hsiang Tai**, Yi-Cheng Yuan, Cheng-Che Tu, and Pin-Chun Wang, "The Noise Behavior of Gap-Type Amorphous Silicon TFT under Illumination," *IEEE Journal of the Electron Devices Society*, VOL. 10, PP. 309-312, 2022.
- 4 **Ya-Hsiang Tai**, Cheng-Che Tu, Yi-Cheng Yuan, Yu-Jia Zhang, and Pin-Chun Wang, "The Photosensitive Mechanism of Gap-Type Amorphous Silicon TFT," *IEEE TRANSACTIONS ON ELECTRON DEVICES*, VOL. 68, NO. 12, PP. 6177-6181, 2021.
- 5 **Ya-Hsiang Tai**, Cheng-Che Tu, Yi-Cheng Yuan, Yu-Jia Chang, Mao-Hsiu Hsu, and Che-Yu Chuang, "Light-Controlled Gap-Type TFT Used for Large-Area Under-Screen Fingerprint Sensor," *IEEE Journal of the Electron Devices Society*, VOL. 9, PP. 517-520, 2021.
- 6 **Ya-Hsiang Tai**, Cheng-Che Tu, and Ping-Ju Huang, "Differential Signal Acquisition Using TFT Light Sensing Pixel Array," *IEEE TRANSACTIONS ON ELECTRON DEVICES*, VOL. 68, NO. 7, PP. 3403-3410, 2021.
- 7 **Ya-Hsiang Tai**, Shan Yeh, Wei-Lin Chen, and Ting-Chang Chang, "The time response for the low temperature poly-silicon thin-film transistors to the x-ray irradiation pulse," *Semiconductor Science and Technology*, VOL. 36, PP. 045003+7, 2021.
- 8 **Ya-Hsiang Tai**, Shan Yeh, Shih-Hsuan Huang, and Ting-Chang Chang, "Total-Dose Effect of X-ray Irradiation on Low-Temperature Polycrystalline Silicon Thin-Film Transistors," *IEEE ELECTRON DEVICE LETTERS*, VOL. 41, NO. 6, PP. 864-867, 2020.
- 9 **Ya-Hsiang Tai**, Shan Yeh, Zheng-Chi Chen, and Ting-Chang Chang, "Effects of X-ray irradiation on the Noise Behavior of Amorphous Indium-Gallium-Zinc-Oxide TFTs," *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*, VOL. 167, NO. 3, P. 027512, 2020.
- 10 **Ya-Hsiang Tai**, Cheng-Che Tu, and Shan Yeh, "Using Amorphous Silicon Gap-Type Thin Film Transistor as Ambient Light Sensors and Proximity Sensors for Smartphones," *IEEE SENSORS LETTERS*, VOL. 3, NO. 10, PP. 1-4, 2019.
- 11 **Ya-Hsiang Tai**, Chi-Hao Lin, Shan Yeh, Cheng-Che Tu, and Karim S. Karim, "LTPS Active Pixel Circuit with Threshold Voltage Compensation for X-Ray Imaging Applications," *IEEE TRANSACTIONS ON ELECTRON DEVICES*, VOL. 66, NO. 10, PP. 4216-4220, 2019.

- 12 **Ya-Hsiang Tai**, Shan Yeh, Po-Chun Chan, Yi-Shen Li, Shih-Hsuan Huang, Cheng-Che Tu, and Ting-Chang Chang, "Negative Threshold Voltage Shift for LTPS TFTs under X-ray Irradiation and Gate Bias," *Semiconductor Science and Technology*, VOL. 34, NO. 9, PP. 095012+6, 2019.
- 13 **Ya-Hsiang Tai**, Chi-Hao Lin, Tsung-Hsuan Ho, Yu-Sheng Huang, Sheng-Miao Huang, and Wei-Min Cho, "Fully Digital Driving Circuit for TFT LCD Using the Concept of Ramp-Stop," *IEEE Transactions on Industrial Electronics*, VOL. 66, No. 3, PP. 2074-2080, 2019.
- 14 **Ya-Hsiang Tai**, Han-Wen Liu, and Po-Chun Chan, "The Vacancy Pool Model for Amorphous In-Ga-Zn-O Thin-Film Transistors," *IEEE Journal of the Electron Devices Society*, VOL. 7, No. 1, PP. 33-37, 2019.
- 15 **Ya-Hsiang Tai**, Han-Wen Liu, Po-Chun Chan*, and Shi-Lun Chiu, "Degradation of a-IGZO Thin-Film Transistors Under Negative Bias and Illumination Stress in the Time Span of a Few Seconds," *IEEE ELECTRON DEVICE LETTERS*, VOL. 39, No. 5, PP. 696-698, 2018.
- 16 **Ya-Hsiang Tai***, and Chi-Hao Lin, "An External Compensation Method for AMOLED Using the Concept of Ramp-Stop," *Journal of the Society for Information Display*, VOL. 25, No. 11, PP. 672–675, 2017.
- 17 **Ya-Hsiang Tai***, Chi-Hao Lin, and Wei-Jia Cheu "Active In-Cell Touch Circuit using Floating Common Electrode as Sensing Pad for the Large Size In-Plane-Switching Liquid Crystal Displays," *Journal of the Society for Information Display*, VOL 25, No. 10, PP. 610–620, 2017.
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- 19 Guan-Fu Chen*, Ting-Chang Chang, Hua-Mao Chen, Bo-Wei Chen, Hong-Chih Chen, Cheng-Ya Li, **Ya-Hsiang Tai**, Yu-Ju Hung, Kuo-Jui Chang, Kai-Chung Cheng, Chen-Shuo Huang, Kuo-Kuang Chen, Hsueh-Hsing Lu, and Yu-Hsin Lin, "Abnormal Dual Channel Formation Induced by Hydrogen Diffusion from SiNx Interlayer Dielectric in Top Gate a-InGaZnO Transistors," *IEEE ELECTRON DEVICE LETTERS*, VOL. 38, No. 3, PP. 334-337, 2017.
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- 23 Yi-Jung Chen*, **Ya-Hsiang Tai**, and Chun-Yi Chang, "Mechanism of hysteresis for a-IGZO TFT studied by changing the gate voltage waveform in measurement" *IEEE TRANSACTIONS ON ELECTRON DEVICES*, VOL. 63, No. 4, PP. 1565-1571, 2016.
- 24 **Ya-Hsiang Tai***, Chun-Yi Chang, and Ya-Wei Chen, "The Current Behaviors of

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- 28 Ya-Hsiang Tai*, Chun-Yi Chang, and Chun-Yu Lin, "Design and Simulation of the Pixel Circuit for a 6-inch Full HD LTPS TFT LCD Based on the New Digital Driving Method," IEEE/OSA JOURNAL OF DISPLAY TECHNOLOGY, VOL. 11, No. 4, PP. 336-340, 2015. (1.674 48/245 ; 0.196)
- 29 Yi-Jung Chen* and Ya-Hsiang Tai, "Hysteresis of Transistor Characteristics of Amorphous IGZO TFTs Studied by Controlling Measurement Speed," ECS SOLID-STATE LETTERS, VOL. 4 No. 4, PP. Q10-Q12, 2015.
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- 38 Yu-Chun Chen*, Ting-Chang Chang, Hung-Wei Li, Wan-Fang Chung, Shih-Cheng Chen, Chang-Pei Wu, Yi-Hsien Chen, *Ya-Hsiang Tai*, Tseung-Yuen Tseng, Fon-Shan Yeh(Huang), "Characterization of environment-dependent hysteresis in indium gallium zinc oxide thin film transistors" Surface and Coatings Technology, VOL. 231, PP 531-534, 2013
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