

Recent Publications

Editor

1. Y. Kuo, Editorial Board, IOP [*J. Physics D: Applied Physics*](#), 2016-present.
2. Y. Kuo, Editor, ECS Trans.13th Thin Film Transistor Technologies, Electrochem. Soc., Pennington, 2016.
3. Y. Kuo, Editor, *ECS Transactions 5th Semiconductor Technology for Ultra Large Scale Integrated Circuits and Thin Film Transistors*, 67(1), Electrochem. Soc., Pennington, 2015.
4. Y. Kuo, Technical Editor, *ECS J. Solid State Science and Technology*, 2012-2015.
5. Y. Kuo, Technical Editor, *ECS Solid State Letters*, 2012-2015.
6. Y. Kuo and M. Furuta, Guest Editors, Focused Issue on Oxide Thin Film Transistors, *ECS J. Solid State Science and Technology*, 3(9), 2014.
7. Y. Kuo, Editor, *ECS Trans.12th Thin Film Transistor Technologies*, 64(1), Electrochem. Soc., Pennington, 2014.
8. Y. Kuo, Editor, ECS Transactions 4th Semiconductor Technology for Ultra Large Scale Integrated Circuits and Thin Film Transistors, 54(1), Electrochem. Soc., Pennington, 2013.
9. P. Mascher, P. Joshi, M. E. Overberg, and Y. Kuo, *ECS Transactions Nanocrystal Embedded Dielectrics for Electronic and Photonic Devices*, 53(4), Electrochem. Soc., Pennington, 2013.
10. Y. Kuo, Associate Editor, *J. Electrochemical Society*, 2003-2012.
11. Y. Kuo, Associate Editor, *Electrochemical Society Letters*, 2003-2012.
12. Y. Kuo, *ECS Transactions Thin Film Transistor Technologies 11*, 50(8), Electrochem. Soc., Pennington, 2012.
13. A. Flewitt, Y. Kuo, and J. Jang, Guest Editors, *IEEE J. Display Technology*, special issue on TFTs, 8(1), 2012.
14. Q. Lin, R. Huang, R. Liu, C. Claeys, K. Lai, T. Jiang, D. Huang, Y. Zhang, P. Song, H. Wu, Z. Guo, C. Lam, Y. Kuo, and S. Wang, *ECS Transactions China Semiconductor Technology International Conference 2012*, 44(1), Electrochem. Soc., Pennington, 2012.
15. Y. Kuo and G. Bersuker, 3rd [Eng. Conf. Intl. ULSIC vs. TFT Conference, ECS Transactions, 37\(1\)](#), Electrochem. Soc., Pennington, 2011.

16. H. Wu, Q. Lin, C. Claeys, D. Huang, Y. Kuo, R. Huang, K. Lai, Y. Zhang, A. Philipossian, R. Liu, T. Jiang, P. Song, S. Xiaoping, *ECS Transactions China Semiconductor Technology International Conference 2011*, 34(1), Electrochem. Soc., Pennington, 2011.
17. Y. Kuo, *ECS Transactions Thin Film Transistor Technologies 10*, 33(5), Electrochem. Soc., Pennington, 2010.
18. H. Wu, Q. Lin, C. Claeys, D. Huang, Y. Shi, Y. Kuo, R. Huang, P. Song, F. Chen, K. Lai, W. Wang, T. Jiang, A. Philipossian, S. Krishnan, *ECS Transactions China Semiconductor Technology International Conference 2010*, 27(1), Electrochem. Soc., Pennington, 2010.
19. Y. Kuo, 2nd [Eng. Conf. Intl. ULSIC vs. TFT Conference, ECS Transactions, 22\(1\)](#) Electrochem. Soc., Pennington, 2009.
20. P. Mascher, P. Joshi, M. E. Overberg, and Y. Kuo, *ECS Transactions Nanocrystal Embedded Dielectrics for Electronic and Photonic Devices*, 19(8), Electrochem. Soc., Pennington, 2009.
21. Y. Kuo, *ECS Transactions Thin Film Transistor Technologies 9*, 16(9), Electrochem. Soc., Pennington, 2008.
22. Y. Kuo, D. Ast, and M. Shur, [Eng. Conf. Intl. ULSIC vs. TFT Conference, ECS Transactions, 8\(1\)](#), Electrochem. Soc., Pennington, 2006.
23. Y. Kuo, Editor, *ECS Transactions Thin Film Transistor Technologies 8*, 3(8), Electrochem. Soc., Pennington, 2006.

Books

1. Y. Kuo, Editor, "[Polycrystalline Silicon Thin Film Transistors](#)," Kluwer Academic Publishers, Norwell, MA, 2003.
2. Y. Kuo, Editor, "[Amorphous Silicon Thin Film Transistors](#)," Kluwer Academic Publishers, Norwell, MA, 2003.
3. Y. Kuo, AVS short course lecture book - *Plasma Technologies in the Fabrication of Thin Film Transistors for Liquid Crystal Displays*, San Jose, 1997; Denver, 1999; Boston, 2000.
4. Y. Kuo, D. G. Ast, and M. Hack, ECS short course lecture book - *Processes, Materials, and Electrical Properties of Thin Film Transistors*, Pennington, 1994 and 1996.
5. Y. Kuo, Monograph of TFT LCD Workshop - *Thin Film Transistor Technologies-a Review*, SID and Taiwan ROC Department of Economic Affairs, 1995.

Special honored or cited papers

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- Cover page article (03/2016). C.-C. Lin* and Y. Kuo, “Light emission enhancement by embedding nanocrystalline cadmium selenide in amorphous ZrHfO high-*k* dielectric thin film deposited on silicon wafer,” *ECS J. Solid State Sci. Technol.*, **5**(3), Q75-Q80 (2016).
- Y. Kuo, invited, “A Metal Oxide Antifuse-Diode Device,” *ECS Trans.*, **69**(12) 23-29 (2015).
- Y. Kuo, invited, “A new type of solid state incandescent LED (SSI-LED) prepared by sputter deposited metal oxide thin film on Si wafer,” *13th ISSP Proc.*, 20-24 (2015).
- D. Li, K. Kim, S. Zhang, G. Dong, Y. Kuo, “High-performance organic–inorganic hybrid optocouplers based on organic light-emitting diodes and a-Si:H photodiodes,” *Sensors and Actuators A*, **236**, 364-368 (2015).
- Y. Kuo, plenary, “Principles and possible system-on-wafer applications of SSI-LEDs.” *AM-FPD Proc.*, 9-12 (2015).
- Y. Kuo, invited, “A Diode-Like Antifuse Device Made of High-*k* Dielectric,” *ECS Trans.*, **67**(1) 183-189 (2015).
- Y. Kuo, invited, “A Solid State Thin Film Incandescent Light Emitting Device,” *IEEE Trans. Elec. Dev.*, **62**(11), 3536-3540 (2015).
- Cover page article. Y. Kuo, invited, “Solid State Incandescent Light Emitting Devices Made of IC Compatible Material and Fabrication Process,” *IEEE Elec. Dev. Soc. News Lett.*, **22-2**, 1-5 (2015).
- Y. Kuo, Gordon E. Moore Medal for Outstanding Achievement in Solid State Science and Technology paper, “Research on Nano and Giga Electronics – Breakthroughs Along the Path,” *ECS Trans.*, **66**(5), 139-154 (2015).
- C.-C. Lin and Y. Kuo, “Light emission from conductive paths in nanocrystalline CdSe embedded Zr-doped HfO₂ high-*k* stack,” *Appl. Phys. Lett.*, **106**, 121107 (2015).
- Y. Kuo, invited, “A Solid State Thin Film Incandescent Light Emitting Device,” *IDEM 2014*, 104-107 (2014).
- Tech News in IEEE Spectrum website (12/2/2014).
<http://spectrum.ieee.org/tech-talk/semiconductors/devices/meet-the-microscopic-light-bulb>
- Cover page article. C.-C. Lin and Y. Kuo, “White Light Emission from Ultra Thin Tungsten Metal Oxide Film,” *J. Vac. Sci. Technol. B*,

32, 011208-1 to -6 (2014).

- A top 20 Most Downloaded Paper. *J. Vac. Sci. Technol. B* on a new metal-doped High-*k* film, May 2013.
- A Research Highlight paper. *Appl. Phys. Letts.*, February, 2013.
- #1 Most-Cited Article of *ECS Transactions* as of December 1, 2012
Yue Kuo, J. Lu, J. Yan, T. Yuan, H. C. Kim, J. Peterson, M. Gardner, S. Chatterjee, and W. Luo, "Sub 2 nm Thick Zirconium Doped Hafnium Oxide High-K Gate Dielectrics," *ECS Trans. 2006 1(5): 447-454*; doi:10.1149/1.2209294
- #4 Most-Cited Article of *ECS Transactions* as of December 1, 2012
Novel Processes for Advanced Memory Technologies:
C.-H. Lin and Y. Kuo, "Embedding of Nanocrystalline Ruthenium in ZrHfO High-*k* Film for Nonvolatile Memories," *ECS Trans. 2008 13(1): 465-470*; doi:10.1149/1.2911531
- #29 Most-Cited Article of *ECS Transactions* as of December 1, 2012
Reliability Issues:
Y. Kuo, "Mixed Oxide High-*k* Gate Dielectrics - Interface Layer Structure, Breakdown Mechanism, and Memories," *ECS Trans. 2006 3(3): 253-263*; doi:10.1149/1.2355717
- A key article chosen by the Guest Editor of *IIE Transactions Volume 44, Issue 7*, 2012 Special Issue: Quality and Design Issues in Nanomanufacturing Systems
C.-H. Yang, T. Yuan, W. Kuo, and Y. Kuo, "Non-Parametric Bayesian Modeling of Hazard Rate with a Change Point for Nanoelectronic Devices," *IIE Trans. 44(7), 496-506* (2012).
- *J. Appl. Phys. Research Highlights & News*, April 19, 2012
C.-C. Lin and Y. Kuo, "Failure mechanism of electromigration of copper interconnections deposited on topographic steps with a plasma-based etch process," *J. Appl. Phys.*, 111, 064909 (2012).
- Paper selected by AIP/APS in *AIP/APS Virtual J. Nanoscale Sci. and Technol.* 24(5) 2011
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- Paper selected by AIP/APS in *AIP/APS Virtual J. Nanoscale Sci. and Technol.* 22(22) 2010
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Paper selected by AIP/APS in *AIP/APS Virtual J. Nanoscale Sci. and Technol.* 17(21) 2008

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- Paper selected by AIP/APS in *AIP/APS Virtual J. Nanoscale Sci. and Technol.* 17(17) 2008

<http://scitation.aip.org/dbt/dbt.jsp?KEY=VIRT01&Volume=CURVOL&Issue=CURISS>
- Top 20 most downloaded paper in *Jpn. J. Appl. Phys.* 2008

<http://www.ipap.jp/jjap/index.htm>
- 3rd poster award in *ECI Semiconductor Conference*, Italy, 2007
- Paper selected by AIP/APS in *Virtual J. Bio. Phys. Res.* 15(10), 2008.

<http://www.vjbio.org/vsearch/servlet/VerityServlet?KEY=VIRT02&mode=results&maxdisp=10&possible1=Yue+Kuo&possible1zone=article&OUTLOG=NO&id=JAPNDE000047000004002300000001&viewabs=VIRT02&key=DISPLAY&docID=1&page=0&chapter=0>
- Paper selected by AIP/APS in *Virtual J. Nanoscale Sci. and Technol.* 13(15) 2006

<http://scitation.aip.org/dbt/dbt.jsp?KEY=VIRT01&Volume=13&Issue=15>.
- Paper selected by AIP/APS in *Virtual J. Bio. Phys. Res.* 11(8), 2006.

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- Top 25 Hottest paper in *Microelectronics Reliability* 2006

http://top25.sciencedirect.com/index.php?cat_id=7&subject_area_id=7&journal_id=00262714.
- Citation in news media *Semiconductor International* (02/02), *C&E News*, *Reuters*, *Industry Week*, and *Semiconductor International Electronic News* (04/01/02), etc.
- “Tech Highlights” section of *Interface* (June 1994)
- Semiconductor International* (p.6 and p.22, June 1992)

Papers

1. C.-C. Lin and Y. Kuo, "Light emission enhancement by embedding nanocrystalline cadmium selenide in amorphous ZrHfO high-*k* dielectric thin film deposited on silicon wafer," *ECS J. Solid State Sci. Technol.*, **5**(2), Q1-Q6 (2016).
2. D. Li, K. Kim, S. Zhang, G. Dong, Y. Kuo, "High-performance organic-inorganic hybrid optocouplers based on organic light-emitting diodes and a-Si:H photodiodes," *Sensors and Actuators A*, **236**, 364-368 (2015).
3. Y. Kuo, invited, "A new type of solid state incandescent LED (SSI-LED) prepared by sputter deposited metal oxide thin film on Si wafer," *13th ISSP Proc.*, 20-24 (2015).
4. Y. Kuo, plenary, "Principles and possible system-on-wafer applications of SSI-LEDs." *AM-FPD 15 Proc.*, 9-12 (2015).
5. Y. Kuo, invited, "A Diode-Like Antifuse Device Made of High-*k* Dielectric," *ECS Trans.*, **67**(1) 183-189 (2015).
6. Y. Kuo, invited, "A Solid State Thin Film Incandescent Light Emitting Device," *IEEE Trans. Elec. Dev.*, **62**(11), 3536-3540 (2015).
7. Y. Kuo, invited, "Solid State Incandescent Light Emitting Devices Made of IC Compatible Material and Fabrication Process," *IEEE Elec. Dev. Soc. News Letters*, **22-2**, 1-5 (2015).
8. Y. Kuo, Gordon E. Moore Medal for Outstanding Achievement in Solid State Science and Technology paper, "Research on Nano and Giga Electronics – Breakthroughs Along the Path," *ECS Trans.*, **66**(5), 139-154 (2015).
9. C.-C. Lin, Y. Kuo, and X. Zhang, "White-Light Emission SSI-LED Made of Sputter Deposited TiO_x Thin Film on Si Wafer," *ECS Trans.*, **64**(44), 1-6 (2015).
10. S. Zhang and Y. Kuo, "SSI-LED Made of WO_x Embedded Zr-Doped HfO₂ High-*k* Stack on Si Wafer," *ECS Trans.*, **66**(4), 223-228 (2015).
11. S. Zhang and Y. Kuo, invited, "Temperature Influence on Current Leakage and Hysteresis of Nc-CdSe Embedded Zr-Doped HfO₂ High-*k* Dielectric Nonvolatile Memory," *ECS Trans.*, **66**(4), 195-202 (2015).
12. C.-C. Lin and Y. Kuo, "Light emission from conductive paths in nanocrystalline CdSe embedded Zr-doped HfO₂ high-*k* stack," *Appl. Phys. Lett.*, **106**, 121107 (2015).
13. Y. Kuo, invited, "A Solid State Thin Film Incandescent Light

- Emitting Device,” *Proc. Intel. Elec. Dev. Meet. (IDEM 2014)*, 104-107 (2014).
14. C.-C. Lin and Y. Kuo, “Factors affecting light emission from solid state incandescent light emitting devices with sputter deposited Zr-doped HfO₂ thin films,” *ECS J. Solid State Sci. Technol.*, 3(10) Q182-189 (2014).
 15. S. Zhang and Y. Kuo, “Temperature Effect on Memory Functions of the nc-CdSe Embedded ZrHfO High-k MOS Device,” *ECS Trans.*, 64(14), 125-131 (2014).
 16. Y. Kuo and G.-W. Chang, “Thin Film Transistors as Driving Devices for Attached Devices,” *ECS Trans.*, 64(10), 145-153 (2014).
 17. X. Liu, Y. Kuo, S. Zhang, and T. Yuan, “Light Wavelength Effects on Charge Trapping and Detrapping of AlO_x Embedded ZrHfO High-k Stack,” *ECS Trans.*, 61(2), 169-175 (2014).
 18. C.-C. Lin and Y. Kuo, “White-light emission from amorphous ZrHfO thin film dielectrics with and without embedded nanocrystalline CdSe dots,” *ECS Trans.*, 61(5) 55-60 (2014).
 19. C.-C. Lin and Yue Kuo, “Post Deposition Annealing Temperature Effect on White-Light Emitting of WO_x Thin Film Stack on Si,” *ECS Trans.*, 61(35), 1-6 (2014).
 20. S. Zhang, Y. Kuo, X. Liu, and C.-C. Lin, “Nonvolatile Memories Based on AlO_x Embedded ZrHfO High-k Gate Dielectric,” *MRS Proc.*, 1691, mrss14-1691-bb10-04 (2014). DOI: 10.1557/opl.2014.597
 21. C.-C. Lin and Y. Kuo, “Post Deposition Annealing Temperature Effect on White-light Emitting of Sputter Deposited Zr-doped HfO₂ Thin Film,” *MRS Proc.*, 1698, mrss14-1698-ii08-20 (2014). DOI: <http://dx.doi.org/10.1557/opl.2014.883>
 22. K. Kim and Y. Kuo, “p⁺ layer effects on a-Si:H solar cell performance,” *IEEE Proc. 40th Photovoltaic Specialist Conf. PVSC*, 3055-3059 (2014).
 23. Y. Kuo and C.-C. Lin, “A Solid-State Incandescent Device for Single-Chip White-Light Emission,” *CLEO: 2014, OSA Technical Digest* (online), paper SM4H.5 (2014). http://www.opticsinfobase.org/abstract.cfm?URI=CLEO_SI-2014-SM4H.5
 24. C.-C. Lin, Y. Kuo, S. Zhang, “Nonvolatile memory devices with AlO_x embedded Zr-doped HfO₂ high-k gate dielectric stack,” *J. Vac. Sci. Technol. B*, 32(3), 03D116-1 to -6 (2014); doi: 10.1116/1.4867170.
 25. C.-C. Lin and Y. Kuo, “White Light Emission from Ultra Thin

- Tungsten Metal Oxide Film,” *J. Vac. Sci. Technol. B*, 32, 011208-1 to -6 (2014); doi: 10.1116/1.4843135. Cover page article of the issue.
26. C.-C. Lin and Y. Kuo, “Nanocrystalline Cadmium Selenide Embedded ZrHfO High-k Gate Dielectric Stack for Nonvolatile Memories,” *J. Appl. Phys.*, 115, 084113 (2014); doi: 10.1063/1.4867215.
 27. T. Yuan, X. Liu*, S. Z. Ramadan*, and Y. Kuo, “Bayesian Analysis for Accelerated Life Tests Using Dirichlet Process Weibull Mixture Model,” *IEEE Trans. Reliability*, 63(1), 58-67 (2014).
 28. Y. Kuo, “Accumulation Layers,” *Wiley Encyclopedia of Electrical and Electronics Engineering*, J. Webster (ed.), 2nd Ed., John Wiley & Sons, Inc. (2014). Published Online : 24 JAN 2014, DOI: 10.1002/047134608X.W3201.pub2
 29. C.-C. Lin and Y. Kuo, “Light wavelength effect on tungsten oxide dielectric properties,” *ECS Trans.*, 58(7), 259-263 (2013).
 30. C.-C. Lin and Y. Kuo, “CdSe Embedded ZrHfO Gate Dielectric Nonvolatile Memories – Charge Trapping and Breakdown Studies,” *ECS Trans.*, 58(5), 109-113 (2013).
 31. X. Liu, Y. Kuo, and T. Yuan, “Exposure Light Wavelength Effects on Charge Trapping and Detrapping of nc-MoO_x Embedded ZrHfO High-k Stack,” *MRS Symp. Proc.*, 1562, mrss13-1562-dd10-05-cc06-05 (2013). DOI:10.1557/opl.2013.826
 32. C.-C. Lin and Y. Kuo, “Nonvolatile memory MOS capacitors made of CdSe embedded ZrHfO high-k gate dielectric,” *Proc. MRS Symp.*, 1562, mrss13-1562-dd05-01 (2013). DOI:10.1557/opl.2013.642
 33. I.-S. Lee and Y. Kuo, “Emission Spectra Study of Plasma Enhanced Chemical Vapor Deposition of Intrinsic, n⁺, and p⁺ Amorphous Silicon Thin Films,” *MRS Symp. Proc.*, 1536, 133-138 (2013). doi:10.1557/opl.2013.919.
 34. Y. Kuo, invited, “Metal Oxide High-k Thin Films – from Gate Dielectrics to Nonvolatile Memories to LEDs,” *ECS Trans.*, 54(1), 273-281 (2013).
 35. Y. Kuo, invited, “Nanocrystals Embedded High-k Nonvolatile Memories – bulk film and nanocrystal material effects,” *ECS Trans.*, 53(4), 121-128 (2013).
 36. Y. Kuo, invited Memorial Plenary Speech of 20th Year Conference, “The Progress of Thin Film Transistor Technology - Large-Area Mass Production and Beyond,” *Proc. Active Matrix Flat Panel Displays*, 5-8 (2013).
 37. Y. Kuo and C.-C. Lin, “Light Emitting from Sputter Deposited Ultra

- Thin Hafnium Oxide Films under Electric Bias Conditions,” *Solid State Electronics*, 89, 120-123 (2013).
38. Y. Kuo and C.-C. Lin, “Electroluminescence from Metal Oxide Thin Films,” *ECS Solid State Lett.*, 2(8) Q59-Q61 (2013).
 39. Y. Kuo and C.-C. Lin, “A Light Emitting Device Made from Thin Zirconium-doped Hafnium Oxide High-*k* Dielectric Film with or without an Embedded Nanocrystal Layer,” *Appl. Phys. Letts.*, 102(3), 031117 (2013). Selected a Research Highlight by APL, February 5, 2013. Downloaded 1,000 time within 2 weeks of publication.
 40. C.-C. Lin and Y. Kuo, “Improvement of Zirconium-doped hafnium oxide high-*k* dielectric properties by adding molybdenum,” *J. Vac. Sci. Technol. B* 31(3), 030605-1 to -5 (2013). A Top 20 Most Downloaded article, May 2013.
 41. Y. Kuo, invited, “Thin Film Transistor Technology – Past, Present, and Future,” *Electrochem. Soc. Interface*, 22(1), 55-60 (2013).
 42. C.-C. Lin and Y. Kuo, “Temperature Effects on Nanocrystalline Molybdenum Oxide Embedded ZrHfO High-*k* Nonvolatile Memory Functions,” *ECS J. Solid State Sci. Technol.*, 2(1), Q16-Q22 (2013).
 43. Y. Kuo and C.-C. Lin, “Crystallization of a-Si Thin Film Using an Ultra Thin n⁺ Poly-Si Seed Layer for Solar Cell Applications,” *IEEE 38th Photovoltaic Specialist Conf. PVSC*, 000342-000345 (2012).
 44. X. Liu, C.-H. Yang, Y. Kuo, and T. Yuan, “Memory Functions of Molybdenum Oxide Embedded ZrHfO High-*k*,” *Electrochem. Solid-State Letters*, 15(6), H1-H3 (2012).
 45. C.-C. Lin and Y. Kuo, “Plasma etching of copper thin film over a dielectric step and electromigration failure mechanism,” 2012 *MRS Proc. Symp.*, 1428, mrss12-1428-c05-03 (2012). Doi:10.1557/opl.2012.1313.
 46. S.-H. Wu, Y. Kuo, and C.-C. Lin, “Light wavelength effects on the performance of a-Si:H PIN photodiode,” 2112 *MRS Proc. Symp. A: Amorphous and Polycrystalline Thin-Film Silicon Science and Technology*, 1426, 199-204 (2012).
 47. Y. Kuo and C.-C. Lin, “Polycrystalline Silicon Thin Films Formed by Multiple Pulsed Rapid Thermal Annealing,” *MRS Proc. Symp. A: Amorphous and Polycrystalline Thin-Film Silicon Science and Technology*, 1426, 269-274 (2012).
 48. Y. Kuo, X. Liu*, C.-H. Yang*, and C.-C. Lin*, “Nonvolatile Memory Characteristics of Molybdenum Oxide Embedded High-*k* Film - Performance and Light Wavelength Effects,” 2112 *MRS Proc. Symp. E: Materials And Physics of Emerging Nonvolatile Memories*, 1430,

- 21-27 (2012).
49. C.-C. Lin and Y. Kuo, "Step effect on Cl₂ plasma-based copper etch process," *J. Vac. Sci. Technol. B*, 30(2) 021204-1 (2012).
 50. C.-C. Lin and Y. Kuo, "Failure mechanism of electromigration of copper interconnections deposited on topographic steps with a plasma-based etch process," *J. Appl. Phys.*, 111, 064909 (2012). This paper was selected as a Research Hights & News from *J. Appl. Phys.* April 19, 2012.
 51. A. Birge and Y. Kuo, "Memory Functions of Nanocrystalline ITO Embedded Zirconium-Doped Hafnium Oxide High-*k* Capacitor with ITO Gate," *J. Electrochem. Soc.*, 159(6) H595-H598 (2012).
 52. B. Luo, C.-H. Lin, and Y. Kuo, "Light Effects on Charge Trapping and Detrapping of nc-ZnO Embedded ZrHfO High-*k* MOS Nonvolatile Memories," *ECS Trans.* 41(3), 93-100 (2011).
 53. S. Chatterjee and Y. Kuo, "Effects of Interfacial Charges on Doped and Undoped HfO_x Stack Layer with TiN Metal Gate Electrode for Nano-Scale CMOS Generation," *J. Nano-Electron. Phys.*, 3(1), 155-162 (2011). C.-H. Lin and Y. Kuo, "Ruthenium modified Zr-doped HfO₂ high-*k* thin films with low equivalent oxide thickness," *J. Electrochem. Soc.*, 158(7), G162-G168 (2011).
 54. C.-H. Yang, T. Yuan, W. Kuo, and Y. Kuo, "Nonparametric Bayesian Modeling of Hazard Rate with a Change-Point for Nanoelectronic Devices," *IIE Trans.* Special issue on Quality, Sensing and Prognostics Issues in Nanomanufacturing, **DOI:** 10.1080/0740817X.2011.587864, June 2011.
 55. C.-H. Lin and Y. Kuo, "Ruthenium modified Zr-doped HfO₂ high-*k* thin films with low equivalent oxide thickness," *J. Electrochem. Soc.*, 158(7), G162-G168 (2011).
 56. C.-H. Lin and Y. Kuo, "Single- and Dual-Layer Nanocrystalline Indium Tin Oxide Embedded ZrHfO High-*k* Films for Nonvolatile Memories – Material and Electrical Properties," *J. Electrochem. Soc.*, 158(8), H756-H762 (2011).
 57. C.-H. Lin and Y. Kuo, "Charge Trapping and Detrapping in nc-RuO Embedded ZrHfO High-*k* Thin Film for Memory Applications," *J. Appl. Phys.*, **110**, 024101 (2011). This paper was selected by *AIP Virt. J. Nan. Sci. Tech.* **24**(6) (2011).
 58. Y. Kuo, invited "Status Review of Nanocrystals Embedded High-*k* Nonvolatile Memories," *ECS Trans.* Dielectrics in Nanosystems and Graphene, Ge/III-V, Nanowires and Emerging Materials for Post-CMOS Applications 3, **35**(3), 13-31(2011).

59. C.-H. Lin and Y. Kuo, "Material and Electrical Properties of Hole-Trapping Memory Capacitors Composed of nc-ITO Embedded ZrHfO High-k Films," *ECS Trans.* 35(2), 249-255 (2011).
60. M. Zhu, C.-H. Lin and Y. Kuo, "Process and Material Study of a Novel Low Thermal Budget Process for Large Scale Thin Film Poly-Si Solar Cell Fabrication," *MRS Proc.*, 1-1321-a03-05 (2011).
61. C.-H. Yang, Y. Kuo, C.-H. Lin and W. Kuo, "Temperature Effect on Charge Transfer Mechanisms of nc-ITO Embedded ZrHfO High-k Nonvolatile Memory," *MRS Proc.* 1337, DOI: 10.1557/opl.2011.1068 (2011).
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63. Y. Kuo, "Hysteresis of Transfer Characteristics of Floating-Gate a-Si:H Thin Film Transistor Nonvolatile Memories," *Electrochem. Solid-State Lett.*, 13(12), H460-463 (2010).
64. Y. Kuo, invited, "Performance and Reliability of Nanocrystals Embedded High-k Nonvolatile Memories," *ECS Trans. High Dielectric Constant and Other Dielectric Materials for Nanoelectronics and Photonics*, 33(3), 425-430 (2010).
65. C.-H. Yang, Y. Kuo, C.-H. Lin, and W. Kuo, "Stress-Induced Deterioration of Nanocrystalline ITO Embedded ZrHfO High-k Nonvolatile Memories," *ECS Trans. High Dielectric Constant and Other Dielectric Materials for Nano-electronics and Photonics*, 33(3), 307-311 (2010).
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