

Ioannis Kymissis

Department of Electrical Engineering
Columbia University
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EDUCATION

Ph.D. in Electrical Engineering and Computer Science, May 2003
Massachusetts Institute of Technology, Cambridge, MA
Thesis title: Field Emission from Organic Materials
Advisor: Prof. Akintunde I. Akinwande

M.Eng. in Electrical Engineering and Computer Science, May 1999
Massachusetts Institute of Technology, Cambridge, MA
Thesis title: Morphology and Performance in Pentacene
Advisor: Prof. Akintunde I. Akinwande
Co-op with IBM Research Laboratories, Yorktown Heights, NY

S.B. in Electrical Engineering and Computer Science, May 1998
Massachusetts Institute of Technology, Cambridge, MA

EMPLOYMENT

**Associate Professor
Electrical Engineering**

**Columbia University
New York, NY
2006 – present**

PI, the Columbia Laboratory for Unconventional Electronics (CLUE).

Technical consultant/Senior engineer

**QDVision, Inc.
Watertown, MA
2005 – 2006**

Assisted the technical launch of the company. Built out facilities, interviewed, hired, and trained initial staff, developed the core processes and demonstration vehicles for the company.

**Postdoctoral Associate
Laboratory for Organic Optics and
Electronics**

**MIT
Cambridge, MA
2003 – 2006**

Advisor: Vladimir Bulovic.

**Research Assistant
Microsystems Technology
Laboratory**

**MIT
Cambridge, MA
1999 – 2003**

Thesis: Field Emission from Organic Semiconductors. Advisor: Tayo Akinwande

**Summer Intern
IBM Research, Tokyo Research Lab**

**Yamato, Japan
Summer 1999**

Developed a new characterization technique for analyzing ion density in liquid crystals and susceptibility of display alignment materials to charging. Advisor: Yoichi Taira

**Co-op Student
IBM Research, T. J. Watson
Research Lab**

**Yorktown Heights, NY
1996-1999**

Led several aspects of the organic field effect transistor effort, most notably developing a photolithographic process for fabricating transistors and investigating the role of semiconductor crystallization on macroscopic performance parameters. (Three assignments, Summer 1996, 1997, June 1998-January 1999). Advisor: Christos Dimitrakopoulos

AWARDS

2014 National Academy of Engineering, Frontiers of Engineering Education Meeting Attendee
2014 National Academy of Engineering, Indo-American Frontiers of Science Meeting Attendee
2014 Popular Science, Invention of the Year (Radiator Labs)
2013 IBM faculty award
2012 Interdigital Innovation Challenge, first prize
2012 MIT/USDOE Clean Energy Prize, first prize
2011 Ocean Optics Blue Ocean Award
2011 Kim Award for Undergraduate Involvement
2010 IBM Faculty award
2009 Vodaphone Americas Foundation Wireless Innovation Award
2008 Google faculty award
2007 NSF CAREER award
2002 IVMC Shoulders Gray Spindt award
1998-2002 IBM Fellowship
2002 IBM Research First Plateau
2002 IBM Outstanding Technical Achievement Award
2000-2002 IBM Invention Achievement Award
1997 Tau Beta Pi, Eta Kappa Nu

**BEST
PAPER/POSTER
AWARDS**

2014 FlexTech Alliance, second place best poster
2014 Global Interposer Technology Conference, second place best poster
2013 IGERT workshop on Energy, Transportation, and Water Infrastructure 3rd place poster
2012 MRS Fall Meeting Best Poster finalist
2011 ACM SenSys'11 Best Student Demo Award
2011 IEEE Communications Society Award, Best Paper
2002 IEEE Electron Device Society Paul Rappaport Award

BOOK

Ioannis Kymissis (monograph). *Organic Field Effect Transistors: Theory, Fabrication and Characterization* Springer, New York, 2009.

PUBLICATIONS

71. "Direct observation of both contact and remote oxygen scavenging of GeO₂ in a metal-oxide-semiconductor stack." S Fadida, P Shekhter, D Cvetko, L Floreano, A Verdini, L Nyns, S Van Elshocht, I Kymissis, M Eizenberg. *Journal of Applied Physics* 116 (16), 164101

70. "Decoupling the Effects of Self-Assembled Monolayers on Gold, Silver, and Copper Organic Transistor Contacts." Chang Hyun Kim, Htay Hlaing, Jong-Am Hong, Ji Hoon Kim, Yongsup Park, Marcia M Payne, John E Anthony, Yvan Bonnessieux, Gilles Horowitz, Ioannis Kymissis. *Advanced Materials Interfaces* 2 (2)

69. "Printable ammonia sensor based on organic field effect transistor." Kalpana Besar, Shyuan Yang, Xin Guo, Weiguo Huang, Ana M Rule, Patrick N Breyse, Ioannis J Kymissis, Howard E Katz. *Organic Electronics* 15 (11), 3221-3230
68. "Sequential lateral solidification of silicon thin films on low-k dielectrics for low temperature integration." F Carta, SM Gates, AB Limanov, H Hlaing, JS Im, DC Edelstein, I Kymissis. *Applied Physics Letters* 105 (24), 242904
67. "Substituted triphenylamines as building blocks for star shaped organic electronic materials." Daniel Lumpi, Brigitte Holzer, Johannes Binting, Ernst Horkel, Simon Waid, Heinz D Wanzenbock, Martina Marchetti-Deschmann, Christian Hametner, Emerich Bertagnolli, Ioannis Kymissis, Johannes Frohlich. *New Journal of Chemistry (ASAP)*
66. "Low-Voltage Organic Electronics Based on a Gate-Tunable Injection Barrier in Vertical Graphene/Organic Semiconductor Heterostructures." Htay Hlaing, Chang-Hyun Kim, Fabio Carta, Chang-Yong Nam, Rob Barton, Nicholas Petrone, James Hone, Ioannis Kymissis. *Nano letters (ASAP)*
65. "Difluorinated 6, 13-Bis (triisopropylsilylethynyl) pentacene: Synthesis, Crystallinity, and Charge-Transport Properties." CH Kim, H Hlaing, MM Payne, SR Parkin, JE Anthony, I Kymissis. *ChemPhysChem (ASAP)*
64. "Clean Graphene Electrodes on Organic Thin-Film Devices via Orthogonal Fluorinated Chemistry." Jonathan Hutchinson Beck, Robert Barton, Marshall Cox, Konstantinos Alexandrou, Nicholas Petrone, Giorgia Olivieri, Shyuan Yang, James Hone, Ioannis Kymissis. *Nano letters (ASAP)*
63. "Encapsulated graphene field-effect transistors for air stable operation." K Alexandrou, N Petrone, J Hone, I Kymissis. *Applied Physics Letters* 106 (11), 113104
62. "Helium-ion-induced radiation damage in LiNbO₃ thin-film electro-optic modulators." HC Huang, JI Dadap, G Malladi, I Kymissis, H Bakhru, RM Osgood. *Optics express* 22 (16), 19653-19661
61. "An integrated CMOS quantitative-polymerase-chain-reaction lab-on-chip for point-of-care diagnostics" H Norian, RM Field, I Kymissis, KL Shepard *Lab on a Chip* Oct 21;14(20):4076-84 2014
60. "Impedance spectroscopy on copper phthalocyanine diodes with surface-induced molecular orientation" CH Kim, H Hlaing, S Yang, Y Bonnassieux, G Horowitz, I Kymissis *Organic Electronics* 2014. 15 (8), 1724-1730
59. "Strongly Correlated Alignment of Fluorinated 5, 11 Bis (triethylgermylethynyl) anthradithiophene Crystallites in Solution Processed Field Effect Transistors" Chang Hyun Kim, Htay Hlaing, Marcia M Payne, Kevin G Yager, Yvan Bonnassieux, Gilles Horowitz, John E Anthony, Ioannis Kymissis. *ChemPhysChem* 15(14):2913-2916, 2014.
58. "Waveguide-integrated photonic crystal spectrometer with camera readout" Fan Meng, Ren-Jye Shiue, Noel Wan, Luozhou Li, Jing Nie, Nicholas C Harris, Edward H Chen, Tim Schrder, Nadia Pervez, Ioannis Kymissis, Dirk Englund. *Applied Physics Letters* 2014, 105 (5) 051103

57. "General method for simultaneous optimization of light trapping and carrier collection in an ultra-thin film organic photovoltaic cell" Cheng-Chia Tsai, Richard R Grote, Jonathan H Beck, Ioannis Kymissis, Richard M Osgood Jr, Dirk Englund. *Journal of Applied Physics* 116 (2) 023110
56. "Electrophoretic deposition of quantum dots for photovoltaic applications" SW Lee, H Hlaing, I Kymissis, IP Herman *ECS Transactions*, 2014 58 (42), 11-17
55. "Nanostructured Electrodes Improve the Fill Factor of Organic Photovoltaics" Jonathan H. Beck, Biswajit Ray, Richard R. Grote, Richard M. Osgood, Jr., Charles T. Black, Muhammad A. Alam, Ioannis Kymissis. *IEEE Journal of Photovoltaics*, 44(4) pp 1100 - 1106 2014
54. "Influence of electromigration on the maximum operating field of (Ba, Sr) TiO₃/polyethylene-C composite capacitors." Shyuan Yang, Eli S. Leland, Shuangyi Liu, and Stephen O'Brien, Ioannis Kymissis. *Journal of Vacuum Science and Technology*, B 31(6), pp 060603 2013.
53. "Poly-(3)hexylthiophene nanowire networks for versatile fabrication of bulk heterojunctions with increased active volume" Theodore J. Kramer, Annabel R. Chew, Theanne Schiros, Ioannis Kymissis, and Irving P. Herman. *J. Vac. Sci. Technol. B* 31, 031209 (2013); 10.1116/1.4802928
52. "Templating and Charge Injection from Copper Electrodes into Solution-Processed Organic Field-Effect Transistors" Chang Hyun Kim, Htay Hlaing, Fabio Carta, Yvan Bonnasieux, Gilles Horowitz, and Ioannis Kymissis. *ACS Appl. Mater. Interfaces*, 2013, 5 (9), pp 3716-3721.
51. "Donor-Acceptor Shape Matching Drives Performance in Photovoltaics" Theanne Schiros, Gregor Kladnik, Deborah Prezzi, Andrea Ferretti, Giorgia Olivieri, Albano Cossaro, Luca Floreano, Alberto Verdini, Christine Schenck, Marshall Cox, Alon A Gorodetsky, Kyle Plunkett, Dean Delongchamp, Colin Nuckolls, Alberto Morgante, Dean Cvetko, Ioannis Kymissis. *Advanced Energy Materials* Volume 3, Issue 7, pages 894-902, July, 2013.
50. "Bimorph actuator with monolithically integrated CMOS OFET control." Fabio Carta, Yu-Jen Hsu, John Sarik, Ioannis Kymissis. *Organic Electronics*, 14, 2013.
49. "Orientation of Luminescent Excitons in Layered Nanomaterials" Jon A. Schuller, Sinan Karaveli, Theanne Schiros, Keliang He, Shyuan Yang, Ioannis Kymissis, Jie Shan, and Rashid Zia. *Nature Nanotechnology* 8(4) 271-276, 2013.
48. "Inexpensive photonic crystal spectrometer for colorimetric sensing applications" Kurt M. Bryan, Zhang Jia, Nadia Pervez, Marshall Cox, Xun Jia, Ioannis Kymissis. *Optics Express* Vol. 21, Issue 4, pp. 4411-4423 2013.
47. "A 4.4-W Wake-Up Receiver Using Ultrasound Data" Kshitij Yadav, Ioannis Kymissis, Peter Kinget. *IEEE Journal of Solid State Circuits* 48(3) 649-660, 2013
46. "A 2.5D Integrated Voltage Regulator Using Coupled- Magnetic-Core Inductors on Silicon Interposer" Noah Sturcken, Eugene J. OSullivan, Naigang Wang, Philipp Herget, Bucknell C. Webb, Lubomyr T. Romankiw, Michele Petracca, Ryan Davies, Robert E. Fontana, Jr., Gary M. Decad, Ioannis Kymissis, Angel V. Peterchev, Luca P. Carloni, William J. Gallagher, and Kenneth L. Shepard. *IEEE Journal of Solid State*

45. "A Tone Analyzer Based on Piezoelectric Polymers" Yu-Jen Hsu and Ioannis Kyymissis. *Journal of the Acoustical Society of America*, 132 (6) 3826-3831 2012.
44. "A high-resolution spectrometer based on a compact planar two dimensional photonic crystal cavity array." Gan, Xuetao; Pervez, Nadia; Kyymissis, Ioannis; Hatami, Fariba; Englund, Dirk. *Applied Physics Letters*, 100(23) 231104-231104-4, 2012 10.1063/1.4724177
43. "Asymmetric leakage in (Ba, Sr)TiO₃ Nanoparticle/parylene-C Composite Capacitors" Shyuan Yang, Brian R. Tull, Nadia K. Pervez, Limin Huang, Eli S. Leland, Dan Steingart, Stephen O'Brien, Ioannis Kyymissis. *Journal of Polymer Physics*, 51(1) 3538, 2013. 10.1002/polb.23156
42. "Effect of solubilizing agent on properties of poly(3,4-ethylenedioxythiophene) (PEDOT) electrodeposited from aqueous solution" Eduard Nasybulin, Shu Wei, Ioannis Kyymissis, Kalle Levon, *Electrochimica Acta*, 78(1) 638-643, 2012. 10.1016/j.electacta.2012.06.083.
41. "Reticulated Organic Photovoltaics" Theanne Schiros, Stefan Mannsfeld, Chienyang Chiu, Kevin G Yager, James Ciston, Alon A Gorodetsky, Matteo Palma, Zac Bullard, Theodore Kramer, Dean Delongchamp, Daniel Fischer, Ioannis Kyymissis, Michael F Toney, Colin Nuckolls. *Advanced Functional Materials* 22(6) 1167-1173, 2012 doi:10.1002/adfm.201102572
40. "Electrochemical codeposition of poly (thieno [3, 2] thiophene) and fullerene: An approach to a bulk heterojunction organic photovoltaic device." Eduard Nasybulin, Marshall Cox, Ioannis Kyymissis, Kalle Levon. *Synthetic Metals*, 162(1-2) 10-17, 2012.
39. "Morphological and Spectroscopic Studies of Electrochemically Deposited Poly(3,4-ethylenedioxythiophene) (PEDOT) Hole Extraction Layer for Organic Photovoltaic Device (OPVd) Fabrication." Eduard Nasybulin, Shu Wei, Marshall Cox, Ioannis Kyymissis, and Kalle Levon. *The Journal of Physical Chemistry C* 115 (10) 4307-4314, 2011
38. "Electrochemically prepared polymer solar cell by three-layer deposition of poly (3, 4-ethylenedioxythiophene)/poly (2, 2'-bithiophene)/fullerene (PEDOT/PBT/C60)." Eduard Nasybulin, Jeremy Feinstein, Marshall Cox, Ioannis Kyymissis, Kalle Levon. *Polymer* 52(16-20)3627-3632, 2011.
37. "Single-layer graphene cathodes for organic photovoltaics." Marshall Cox, Alon Gorodetsky, Bumjung Kim, Keun Soo Kim, Zhang Jia, Philip Kim, Colin Nuckolls, and Ioannis Kyymissis *Appl. Phys. Lett.* 98 123303, 2011; doi:10.1063/1.3569601
36. "Laboratory pentacene and parylene evaporation systems for fabricating organic thin film devices." Zhang Jia, Vincent W. Lee, Yu-Jen Hsu, Ioannis Kyymissis. *Journal of Vacuum Science and Technology B* 29(2) 022401, 2011
35. "A Locally Amplified Strain Sensor Based on a Piezoelectric Polymer and Organic Field-Effect Transistors." Yu-Jen Hsu, Zhang Jia, Ioannis Kyymissis. *IEEE Transactions on Electron Devices*, 58(3) 910-917, 2011.
34. "An electrostrictive high dielectric constant fluorinated terpolymer sheet fabricated by a melt and stretch extrusion process." Sung-Jin Kim and Ioannis Kyymissis *Journal*

33. "Energy harvesting active networked tags (EnHANTs) for ubiquitous object networking." Gorlatova, M.; Kinget, P.; Kymissis, I.; Rubenstein, D.; Wang, X.; Zussman, G. *IEEE Wireless Communications* 17(6) 18 - 25, 2010.
32. "In situ study of pentacene interaction with archetypal hybrid contacts: fluorinated vs alkane thiols on gold" Zhang Jia, Vincent W. Lee, Luca Floreano, Alberto Verdini, Albano Cossaro, Alberto Morgante, Ioannis Kymissis. *Physical Review B*, 82(12) 125457, 2010
31. "Reticulated Heterojunctions for Photovoltaic Devices" *Angewandte Chemie*, Alon A. Gorodetsky, Chien-Yang Chiu, Theanne Schiros, Matteo Palma, Marshall Cox, Zhang Jia, Wesley Sattler, Ioannis Kymissis, Michael Steigerwald, Colin Nuckolls. 149(43) 7909-7912, October 18, 2010
30. "A Laboratory-Based Course in Display Technology" J. Sarik, A. I. Akinwande, I. Kymissis. *IEEE Transactions on Education* 54(2) 314-319, 2010.
29. "Doping and illumination dependence of 1/f noise in pentacene thin film transistors" Z. Jia, I. Meric, K. Shepard, I. Kymissis. *IEEE Electron Device Letters*, 57(2) 380 - 384, 2010.
28. "Study of local mobility in pentacene field-effect transistors using spatially resolved photocurrent measurement" Z. Jia, Meng Shi, Ioannis Kymissis. *IEEE Electron Device Letters*, 31(7) 761-763 2010.
27. "Photonic Crystal Spectrometer" N. K. Pervez, W. Cheng, Z. Jia, M. P. Cox, H. M. Edrees, and I. Kymissis. *Optics Express*, 18(8) 8277-8285 2010.
26. "A Directly-Addressed Monolithic LED Array as a Projection Source" V. Lee and I. Kymissis. *Journal of the Society for Information Display*, 18:10, pp 208-212 (2010)
25. "Photovoltaic Universal Joints: Ball-and-Socket Interfaces in Molecular Photovoltaic Cells" Noah J. Tremblay, Alon A. Gorodetsky, Marshall P. Cox, Theanne Schiros, Bumjung Kim, Rachel Steiner, Zachary Bullard, Aaron Sattler, Woo-Young So, Yoshimitsu Itoh, Michael F. Toney, Hirohito Ogasawara, Arthur P. Ramirez, Ioannis Kymissis, Michael L. Steigerwald, Colin Nuckolls. *ChemPhysChem* 11(4) 799-803 2010.
24. "Gene expression analysis with an integrated CMOS microarray by time-resolved fluorescence detection" Ta-chien D. Huang, Sunirmal Paul, Ping Gong, Rastislav Levicky, John Kymissis, Sally A. Amundson, Kenneth L. Shepard. *Biosensors and Bioelectronics* 26(5), 2660-2665., 2010.
23. "FBAR-CMOS Oscillator Array for Mass-Sensing Applications" M. Johnston, I. Kymissis, K. Shepard. *IEEE Sensors Journal*, 10(6) 1042-1047 2010.
22. "Photocurrent Study of Oxygen Mediated Doping States in Pentacene Thin Film Transistors." Z. Jia, L. Banu, I. Kymissis. *IEEE Transactions on Electron Devices*, 57(2) 380-384 2010.
21. "LED-Based Optical Device for chronic in-vivo cerebral blood volume measurement." M. Cox, H. Ma, M. E. Bahlke, J. H. Beck, T.H. Schwartz, I. Kymissis. *IEEE Transactions on Electron Devices*, 57(1) pp 174-177. January 2010.

20. "Laboratory Thin-Film Encapsulation of Air Sensitive Organic Devices." S. P. Subbarao, M. E. Bhalke, I. Kymissis. *IEEE Transactions on Electron Devices*, 57(1) pp 153-156. January 2010.
19. "High K Capacitors and OFET Gate Dielectrics from Self Assembled BaTiO₃ and (Ba,Sr)TiO₃ nanocrystals in the Superparamagnetic Limit." L. Huang, Z. Jia, I. Kymissis, S. O'Brien. *Advanced Functional Materials* 20(4) 554-560 2010.
18. "Performance of Monolayer Graphene Nanomechanical resonators with electrical readout." Changyao Chen, Sami Rosenblatt, Kirill I. Bolotin, William Kalb, Philip Kim, Ioannis Kymissis, Horst L. Stormer, Tony F. Heinz, James Hone. *Nature Nanotechnology* 4(12) 861-867 2009.
17. "Solar Cell from a Solution Processable Pentacene with Improved Air Stability." Alon A. Gorodetsky, Marshall Cox, Noah J. Tremblay, Ioannis Kymissis and Colin Nuckolls. *Chemistry of Materials*, 2009, 21 (18), pp 4090-4092.
16. "Isolation of OFETs by surface patterning with UV/ozone process." Sung-Jin Kim, Henry Beveridge, Jeffrey Y. Koberstein, Ioannis Kymissis *Journal of Vacuum Science and Technology B* 27(3):1057-1059 May 2009.
15. "An organic active-matrix imager." Nausieda I, Ryu K, Kymissis I, Sodini, C., Bulovic, V. *IEEE Transactions on Electron Devices* 55(2):527-532 Feb 2008.
14. "Tunable threshold voltage and flatband voltage in pentacene field effect transistors" A. Wang, I. Kymissis, V. Bulovic, A. I. Akinwande. *Applied Physics Letters* 89 (11):112109 Sep 11 2006 .
13. "Engineering density of semiconductor dielectric interface states to modulate threshold voltage in OFETs." A. Wang, I. Kymissis, V. Bulovic, and A. I. Akinwande. *IEEE Transactions on Electron Devices*, 53(1):9-13, Jan. 2006.
12. "A lithographic process for integrated organic field effect transistors." *Journal of Display Technology*, I. Kymissis, A. I. Akinwande, and V. Bulovic. 1(2):289294, Dec. 2005.
11. "Direct extraction of mobility in pentacene OFETs using C-V and I-V measurements." K. Ryu, I. Kymissis, V. Bulovic, C. G. Sodini. *IEEE Electron Device Letters* 26(10):716-718, Oct. 2005
10. "Organic field emission device integrated with organic transistor" Kymissis I, Akinwande AI. *IEEE Transactions on Electron Devices*, 52 (8): 1907-1914 Aug. 2005
9. "Memory effect from charge trapping in layered organic structures." S-H. Kang, T. Krisp, I. Kymissis, V. Bulović. *Applied Physics Letters* 85 (20):4666-4668 November 15, 2004
8. "Electrical and optical characterization of field emitter tips with integrated vertically stacked focus." L. Dvorson, G. Sha, I. Kymissis, C-Y. Hong, A. I. Akinwande. *IEEE Transactions on Electron Devices* 50 (12): 2548-2558 December 2003
7. "Field Emission from Patterned Organic Conducting Composite." I, Kymissis, A. I. Akinwande. *Applied Physics Letters* 82 (14): 2347-2349 April 7 2003.

6. "Double Gated Silicon Field Emitters." L. Dvorson, I. Kymissis, A. I. Akinwande. *Journal of Vacuum Science and Technology B* 21, 486 January 2003
5. "Patterning Pentacene Organic Thin Films." I. Kymissis, C. D. Dimitrakopoulos, S. Purushothaman. *Journal of Vacuum Science and Technology B*. 20 (3): 956-959 May-Jun 2002.
4. "High-performance bottom electrode organic thin-film transistors." I. Kymissis, C. D. Dimitrakopoulos, S. Purushothaman. *IEEE Transactions on Electron Devices* 48 1060-1064 June 2001.
3. "Low Voltage, High Mobility Pentacene Transistors with High Dielectric Constant Insulators." C. D. Dimitrakopoulos, I. Kymissis, S. Purushothaman, D. A. Neumayer, P. R. Duncombe, R. B. Laibowitz. *Advanced Materials* 11 1372-1375 Nov 1999.
2. "Low Operating Voltage and High Mobility Field Effect Transistors Comprising Pentacene and Relatively High Dielectric Constant Insulators." C. D. Dimitrakopoulos, S. Purushothaman, J. Kymissis, A. Callegari. *Science* 283 822-824 Feb 5 1999.
1. "Trans-trans 2, 5 bis(2-(5-(2,2 Bithienyl))ethenyl) Thiophene: Synthesis, Characterization, Thin Film Deposition, and Fabrication of Organic Field Effect Transistors." C. D. Dimitrakopoulos, A. Afzali-Ardakani, B. Furman, J. Kymissis, S. Purushothaman. *Synthetic Metals* 89 193-197 Sep 1997.

CONFERENCE
PRESENTA-
TIONS/POSTERS

(invited) SPIE Optics+Photonics, San Diego, CA 2015.

(invited) Fall MRS, Boston, MA 2014.

(invited) "An Implantable System for Brain Blood Flow Monitoring Using Flexible OLEDs and OPDs." Ioannis (John) Kymissis, Amrita Masurkar, Youngwan (Willis) Kim, En-Chen (Patrick) Chen, Hongtao Ma, Theodore Schwartz. USAMC 17th Biannual Bioscience review, Baltimore MD. 2014.

"BEOL Integration with excimer laser recrystallization" Fabio Carta, Ioannis Kymissis. GIT 2013 (best poster award, 2nd place)

"A printable sensor for ammonia vapors." Kalpana, Shyuan Yang, Ioannis Kymissis, Howard Katz. FlexTech 2014, Phoenix, AZ.

"Metacapacitors: Printed Capacitors for High Efficiency Power Supplies." Shyuan Yang, Ioannis Kymissis. FlexTech 2014, Phoenix, AZ. (best poster award, 2nd place)

"An Implantable System for Brain Blood Flow Monitoring Using Flexible OLEDs and OPDs." FlexTech 2014, Phoenix, AZ.

(invited) "Thin Film Electronics for Mechanical Sensing and Actuation" Ioannis Kymissis. IEEE 2014 Packaging Symposium, Binghamton, NY

"Printable, High Performance Nanoparticle/Polymer Composite Capacitors" Shyuan Yang, Barry Van Tassell, Shuangyi Liu, Eli S. Leland, Daniel A. Steingart, Stephen O'Brien, Ioannis Kymissis. Fall MRS, December 2013. Boston MA

"Low Temperature Spray Deposition of Multilayer Polymer Ceramic Composite Capacitors" Barry Van Tassell, Paul Chando, Shyuan Yang, Shuangyi Liu, Limin Huang,

Stephen O'Brien, Ioannis Kymissis, Daniel A Steingart. Fall MRS, December 2013. Boston MA

"Printable Ammonia Sensor Based on Organic Field Effect Transistor" Kalpana Besar, Ana Maria Rule, Patrick N. Breyse, Ioannis John Kymissis, Howard E Katz. Fall MRS, December 2013. Boston MA

"Electrophoretic Deposition of Solution-Phase Ligand-Exchanged Quantum Dots and Their Application in Optoelectronic Devices" Htay Hlaing, Seung Whan Lee, Irving P Herman, Ioannis Kymissis. Fall MRS, December 2013. Boston MA

"Analysis of Optimized Photovoltaic Devices Using Impedance Spectroscopy" Jonathan Beck, James Basham, David Gundlach, Ioannis Kymissis. Fall MRS, December 2013. Boston MA

"Investigation of Photocurrent and Photogeneration in Organic Field Effect Transistors" Amrita Masurkar, Ioannis Kymissis. Fall MRS, December 2013. Boston MA

"Monolithic versus Three-Terminal Tandem Photovoltaics: A Detailed Balance Comparison" Octavi Escala Semonin, Paul A George, Robert A Barton, Ioannis Kymissis. Fall MRS, December 2013. Boston MA

"Graphene Electrodes for Quantum Dot Solar Cells" Robert A Barton, Octavi E Semonin, Joshua Choi, Nicholas Petrone, Yuanda Gao, James Hone, Jonathan Owen, Ioannis Kymissis. Fall MRS, December 2013. Boston MA

"Large-Area CVD Graphene as Molecular Template and Transparent Electrode for Organic Solar Cells" Htay Hlaing^{1,2}, Rob Barton¹, Theanne Schiros¹, Nicholas Petrone², James Hone^{1,2}, Ioannis Kymissis, Fall MRS, December 2013. Boston, MA.

"An implantable PVDF microphone for a totally implantable cochlear implant" Andy Zhang, Elizabeth Olson, Ioannis Kymissis. SPIE Optics+Photonics, August 2013. San Diego, CA.

"Solution-Processed Organic Transistors with Chemically Modified Copper Electrodes." Chang Hyun Kim, Htay Hlaing, Fabio Carta, Yvan Bonnassieux, Gilles Horowitz, and Ioannis Kymissis. FPI-11. June 2-11 2013, Aquitaine, France.

"Integrated CMOS Quantitative Polymerase Chain Reaction Lab-on-Chip," Haig Norian, Ioannis Kymissis, Kenneth Shepard. 2013 Symposium on VLSI Circuits, to appear June 2013.

"Amorphous Silicon - graphene anodes for lithium ion batteries", Filippos Farmakis, Kostas Alexandrou, Costas Elmasides, Ioannis Kymissis and Nikolaos Georgoulas, SPIE Grenoble to appear April 2013

"Demo: An adaptive multihop network testbed for energy harvesting active networked tags (EnHANTs)," R. Margolies, L. Pena, K. Kim, Y. Kim, M. Wang, M. Gorlatova, J. Sarik, J. Zhu, P. Kinget, I. Kymissis, and G. Zussman, in Proc. IEEE INFOCOM'13, Apr. 2013.

"Project-based learning within a large-scale interdisciplinary research effort," M. Gorlatova, J. Sarik, I. Kymissis, and G. Zussman, in Proc. ITiCSE 2013

“Printable, flexible, high performance capacitors for power circuit application,” S. Yang, B. Van Tassell, P. Chando, C. Le, S. Liu, E. S. Leland, Conference D. A. Steingart, S. O'Brien, P. R. Kinget, I. Kymissis, , FlexTech Alliance, January 2013.

“Asymmetric Leakage in (Ba, Sr)TiO₃ Nano Particle/Parylene-C Composite Capacitors,” S. Yang, B. R. Tull, N. K. Pervez, L. Huang, E. S. Leland, D. Steingart, S. O'Brien, I. Kymissis, MRS Conference, Best Poster Award Nominee, November 2012.

“Metacapacitor: Flexible, low cost, high performance capacitor for power electronics” S. Yang, B. Van Tassell, P. Chando, C. Le, S. Liu, E. S. Leland, D. A. Steingart, S. O'Brien, P. R. Kinget, I. Kymissis, NY-Best Conference, November 2010.

J. Sarik, C. Li, and I. Kymissis, “Fabricating electronics with rapid prototyping tools,” in Proc. 6th TEI, Jan. 2012.

“Use of Subwavelength Structures to Improve Optics and Transport in Organic Photovoltaics.” J. H. Beck, B. Ray, C. Tsai, R. R. Grote, R. M. Osgood, D. Englund, C. T. Black, M. A. Alam, I. Kymissis. MRS Fall 2012, Boston, MA.

“Electrostrictor with Monolithically Integrated CMOS TFT Control.” Fabio Carta, Yu-Jen Hsu, John Sarik, Ioannis Kymissis. CIMTEC 2012. June 10-14 2012, Montecatini Terme, Italy.

(invited) “Energy Harvesting Active Network Tags (EnHANTs)” Ioannis Kymissis. IdTechEx Energy Harvesting 2012.

“Active matrix PVDF array for thermal imaging and acoustic signal processing applications.” Yu-Jen Hsu, Shyuan Yang, Nadia Pervez, Ioannis Kymissis. SPIE Optics+Photonics 2012.

“High throughput pH and ion sensing via CMOS FGFET arrays” Alok Prabu, Shyuan Yang, Ioannis Kymissis, Kalle Levon. SPIE Optics+Photonics 2012.

“Fabrication and Electrochemical Characterization of Multiplexed Electrode System for DNA Biosensing. ” Zeynep Basaran, Janet Lee, Marisa Buzzeo, Ioannis Kymissis. SPIE Optics+Photonics 2012.

“Evaluating Photovoltaic Performance Indoors,” Y. Afsar, J. Sarik, M. Gorlatova, G. Zussman, I. Kymissis, in Proc. 2012 IEEE Photovoltaic Specialist Conference, Austin, TX, June 2012.

(Invited) “An Active Matrix Microphone.” Ioannis Kymissis, Y. Hsu. ISDRS 2011.

“Electrical readout of photochromic state.” Hassan Edrees, Nadia Pervez, Ioannis Kymissis. SPIE Optics+Photonics 2011.

“Sequential Lateral Solidification of Silicon on Low-K Dielectrics for 3D Integrated Circuits,” V.W. Lee, G.S. Ganot, A.B. Limanov, J.S. Im, I. Kymissis. T5.20, Materials Research Society Fall Meeting 2011.

“Method for Efficient Droplet Extraction from Covered Droplet-in-Oil Electrowetting-on-Dielectric Devices.” Haig Norian, Ioannis Kymissis and Kenneth Shepard; MRS Fall Meeting 2011.

“Demo: prototyping UWB-enabled enhants.” Jianxun Zhu, Gerald Stanje, Robert Margolies, Maria Gorlatova, John Sarik, Zainab Noorbhaiwala, Paul Miller, Marcin Szczodrak, Baradwaj Vigraham, Luca Carloni, Peter Kinget, Ioannis Kymissis, and Gil Zussman. In Proceedings of the 9th international conference on Mobile systems, applications, and services (MobiSys '11). ACM, New York, NY, USA, 387-388. DOI=10.1145/1999995.2000048

“Demo: Organic solar cell-equipped energy harvesting active networked tag (EnHANT) prototypes” Gerald Stanje, Paul Miller, Jianxun Zhu, Alexander Smith, Olivia Winn, Robert Margolies, Maria Gorlatova, John Sarik, Marcin Szczodrak, Baradwaj Vigraham, Luca Carloni, Peter Kinget, Ioannis Kymissis, and Gil Zussman. In Proceedings of the 9th ACM Conference on Embedded Networked Sensor Systems (SenSys '11). ACM, New York, NY, USA

(Invited) “Photocurrent And Noise Analysis as Alternative Approaches to Understanding OFET Behavior,” Ioannis Kymissis. Organic Electronics Workshop 2011

“Building interactive systems using unconventional electronics” John Sarik, Ioannis Kymissis. TEI 2011. 10.1145/1935701.1935788

“A piezoelectric polymer based tone analyzer with integrated organic field effect transistors”, Yu-Jen Hsu and Ioannis Kymissis. MRS Spring Meeting 2011.

“An active matrix arrayed microphone with acoustic bandwidth response”, Yu-Jen Hsu and Ioannis Kymissis. Transducers 2011 Beijing.

“An active matrix arrayed microphone with acoustic bandwidth response”, Yu-Jen Hsu and Ioannis Kymissis. SPIE Photonic Devices + Applications 2011.

(Invited) “Locally amplified sensors for large area systems.” - MRS Spring, 2011

“Photovoltaic Device Performance Enhancement by Interfacial Decoration of Bulk-Heterojunctions with Semiconducting Nanocrystals” Theodore Kramer, Ioannis Kymissis, and Irving Herman. APS March Meeting 2011.

(Invited) “Photocurrent And Noise Analysis as Alternative Approaches to Understanding OFET Behavior,” I. Kymissis, ICEL'10, Ann Arbor, MI. October 2010.

“Lab kits using the Arduino Prototyping Platform”. T3C. John Sarik and Ioannis Kymissis. ASEE/IEEE Frontiers in Education. Washington, DC October 2010

“A directly-addressed monolithic LED array as a projection source,” Vincent W. Lee, Ioannis Kymissis, SPIE Optics+Photonics 2010, San Diego, CA, Aug 2010

“Strain field and magnetic field sensors with OLED indicators employing piezoelectric and magnetoresistive gated OFET,” Hsin-Jung Lee, Shyuan Yang, Yu-Jen Hsu, Ioannis Kymissis, SPIE Optics+Photonics 2010, San Diego, CA, Aug 2010

“Photonic crystal spectrometer,” Nadia K. Pervez, Warren Cheng, Zhang Jia, Marshall P. Cox, Hassan M. Edrees, Ioannis Kymissis, SPIE Optics+Photonics 2010, San Diego, CA, Aug 2010

“Weak 2D photonic crystals for outcoupling of multiple color bands,” Nadia K. Pervez, Warren Cheng, Chee Wei Wong, Ioannis Kymissis, SPIE Optics+Photonics 2010, San

Diego, CA, Aug 2010

“Demo: Prototyping Energy Harvesting Active Networked Tags with MICA2 Motes,” Gorlatova M., Sharma T., Shrestha D., Xu E., Chen J., Skolnik A., Piao D., Kinget P., Kymissis I., Rubenstein D., Zussman G., IEEE Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), Boston, MA, June 2010

(invited) I. Kymissis. “Hybrid Integration using Organic Semiconductors” CMOE 2010, Storrs, CT.

Z. Jia, V.W. Lee, L. Floreano, A. Verdini, A. Cossaro, A. Morgante, I. Kymissis. “Direct observation of pentacene-thiol interaction using x-ray spectroscopy” II6.86, MRS Conference, Spring 2010

“Performance of graphene nanoelectromechanical resonators” Changyao Chen, Sami Rosenblatt Kirill Bolotin, William Kalb, Philip Kim, Ioannis Kymissis, Horst Stormer, Tony Heinz, James Hone. APS March Meeting, 2010

“Photonic Crystal Spectrometer” Nadia Pervez, Warren Cheng, Zhang Jia, Marshall Cox, Hassan Edrees, Ioannis Kymissis, APS March Meeting, 2010

“Direct observation of pentacene-thiol interaction using x-ray spectroscopy” Zhang Jia, Vincent Lee, Luca Floreano, Alberto Verdini, Albano Cossaro, Alberto Morgante, Ioannis Kymissis. APS March Meeting, 2010

“Personalizing your pixels” John Sarik, Ioannis Kymissis. 4th ACM International Conference on Tangible, Embedded, and Embodied Interaction TEI10 pp 353-356, Cambridge, MA. January 2010.

“NEMS applications of graphene” Changyao Chen; Rosenblatt, Sami; Bolotin, Kirill I.; Kim, Philip; Kymissis, Ioannis; Stormer, Horst L.; Heinz, Tony F.; Hone, James; IEEE International Electron Devices Meeting (IEDM), 2009

“A Locally Amplified Organic Transistor Strain Sensor Based on a Piezoelectric Polymer” Y.J. Hsu, Z. Jia, I. Kymissis, Aug, 2009, SID-MAC Symposium on Organic and Thin Film Electronics, Cornell University.

“Novel High Frequency Surface Mounted Optical Recording System for Chronic Intracranial Optical Imaging.” Ma, H. T. and Cox, M. and Bahlke, M. and Beck, J. and Zhao, M. and Kymissis, I. and Schwartz, T. Epilepsia, 50 p 393, 2009.

“Semiconductor-Dielectric Interfacial Study using Spectral-Spatial Photocurrent Probes and 1/f Noise Probe in Organic Field Effect Transistors.” Zhang Jia, Inanc Meric, Kenneth Shepard and Ioannis Kymissis. 2009 Fall MRS, Boston, MA.

“Strain Field and Magnetic Field Sensors with OLED Indicators Employing Piezoelectric and Magnetoresistive Gated OFET.” Hsin-Jung Lee, Shyuan Yang, Yu-Jen Hsu and Ioannis Kymissis. 2009 Fall MRS, Boston, MA.

“Semiconductor-Dielectric Interfacial Study Using Spectral-Spatial Photocurrent Probes and 1/f Noise Probe in Organic Field Effect Transistors” Zhang Jia, Inanc Meric, Kenneth Shepard, and Ioannis Kymissis. 2009 ISDRS, College Park, MD.

(invited) “A locally amplified strain sensor using piezoelectric polymers and Organic

Field Effect Transistors” I. Kymissis. 2009 SPIE International Symposium on Optical Science and Technology, San Diego CA.

”Challenge: Ultra-Low-Power Energy-Harvesting Active Networked Tags (EnHANTs)” Maria Gorlatova, Peter Kinget, Ioannis Kymissis, Dan Rubenstein, Xiaodong Wang, and Gil Zussman. Mobicom 2009, Beijing, China.

”An Array of Monolithic FBAR-CMOS Oscillators for Mass-Sensing Applications.” M.L. Johnston, I. Kymissis, and K.L. Shepard. Transducers 2009, Denver CO.

(invited) ”Flexible Electronics Activities in the United States.” 2nd International Symposium on Flexible Organic Electronics, Halkidiki, Greece. July 2009.

(invited) ”Organic semiconductor-based sensors for strain and reflectivity monitoring.” 2nd International Symposium on Flexible Organic Electronics, Halkidiki, Greece. July 2009.

”Organic Photovoltaics from Extended Aromatic Molecules.” Alon A. Gorodetsky, Marshall Cox, Noah J. Tremblay, Ioannis Kymissis, Colin Nuckolls. Symposium on Organic and Thin-Film Electronics, Society for Information Displays, Ithaca, NY, August 18, 2009.

”Air Stable Organic Photovoltaics from Small Molecule Acene Derivatives.” Alon A. Gorodetsky, Marshall Cox, Noah J. Tremblay, Ioannis Kymissis, Colin Nuckolls. Organic Microelectronics and Optoelectronics Workshop V, American Chemical Society and Materials Research Society, San Francisco, CA, July 6-9, 2009.

”Spin-cast high-k non-hysteresis barium titanate nanoparticle thin film as gate dielectric in organic thin film transistors” Z. Jia, L. Huang, S. O’Brien, I. Kymissis. MRS Spring 2009, San Francisco, CA.

”Photocurrent study of traps states in pentacene thin film transistors” Z. Jia, L. Banu, I. Kymissis. MRS Spring 2009, San Francisco, CA.

”A Locally Amplified Organic Transistor Sensor Based on a Piezoelectric Polymer” Y.-J. Hsu, Z. Jia, I. Kymissis. MRS Spring 2009, San Francisco, CA.

”A Locally Amplified Organic Transistor Sensor Based on a Piezoelectric Polymer” Y.-J. Hsu, Z. Jia, I. Kymissis. Connecticut Microelectronic and Optoelectronic Consortium Annual Meeting, 2009.

”Photocurrent study of traps states in pentacene thin film transistors”. Z. Jia, L. Banu, I. Kymissis. Connecticut Microelectronic and Optoelectronic Consortium Annual Meeting, 2009.

(invited) ”Integrated Circuits, Optics, and Sensors using Organic Field Effect Transistors and Photodetectors” International Meeting on Information Display/Asia Display 2008. Ilsan, Korea, 2008.

(invited) ”Beyond mobility: optical and electrical probes for characterizing and understanding OFETs” I. Kymissis. 2008 International Materials Research Conference (IMRC), Chongqing, China.

(invited) ”Active matrix photodetection using OFETs and printed photoconductors”

I. Kymissis. 2008 International Materials Research Conference (IMRC), Chongqing, China.

Influence of Source-Drain Contact Resistance on Mobility in Organic FETs, K. Ryu, I. Nausieda, I. Kymissis, V. Bulovic, and C.G. Sodini, 3rd Annual Organic Microelectronics Workshop, Seattle, WA, July 2007

“An Organic Imager for Flexible Large Area Electronics” I. Nausieda, K. Ryu, I. Kymissis, A. Akinwande, V. Bulović, C. Sodini. 2007 International Solid State Circuits Conference (ISSCC), San Francisco, CA.

(invited) “Characterization of OFETs in the linear region of operation.” ACS NERM, Binghamton, NY. October 2006. I. Kymissis, K. Ryu, A. Wang, I. Nausieda, C. Sodini, V. Bulović.

“A Locally Amplified Organic Transistor Strain Sensor Based on a Piezoelectric Polymer” Y.J. Hsu, Z. Jia, I. Kymissis, Nov, 2008, IEEE EDS Western Region Symposium, Rochester, New York.

“Control of Parasitics in OFETs Through Self-aligned Processing.” Ivan A Nausieda, Ioannis Kymissis, and Vladimir Bulović. MRS Fall 2006, San Francisco, CA.

“Molecular Organic Electronic Circuits” V. Bulović, K. Ryu, C. G. Sodini, I. Kymissis, A. Wang, I. Nausieda, A. I. Akinwande. IEEE/ACM International Conference on Computer-Aided Design, 2006. ICCAD '06. Nov. 2006 Page(s):830 - 831

“A Self Aligned Fully Lithographic Process for Integrated OFETs.” Ioannis Kymissis, Kevin Ryu, Akintunde I. Akinwande, Charles G. Sodini and Vladimir Bulović. MRS Spring 2005, San Francisco, CA.

“A process for integrated organic photodetection.” I. Kymissis, C.G. Sodini, A. I. Akinwande and V. Bulović, SPIE Photonics West, San Jose, CA, January 2005

“An Organic Semiconductor Based Process for Photodetecting Applications.” I. Kymissis, C.G. Sodini, A. I. Akinwande and V. Bulović. International Electron Device Meeting, 2004, San Francisco, CA, December 2004.

“Process Control of Threshold Voltage in Organic FETs.” A. Wang, I. Kymissis, V. Bulović, and A.I. Akinwande. International Electron Device Meeting, 2004, San Francisco, CA, December 2004.

(invited) “What Will be the New Oxide for Organic Semiconductors?” I. Kymissis, A.I. Wang, A.I. Akinwande, and V. Bulović. Society for Information Display-Mid Atlantic Chapter OLED Research and Technology Conference, Park Ridge, NJ, November 2004

“Physical Extraction of Mobility in OFETs” K. Ryu, I. Kymissis, V. Bulović and C. Sodini Society for Information Display-Mid Atlantic Chapter OLED Research and Technology Conference, Park Ridge, NJ, November 2004

“Pentacene Organic TFT with Al₂O₃ Gate Dielectric Deposited using Atomic Layer Deposition Method.” YongWoo Choi, JinSeong Park, Ioannis Kymissis, Annie Wang, Roy G. Gordon and Akintunde I. Akinwande. Materials Research Society Spring Meeting, San Francisco, CA, April 2004

“Fabrication of Active Devices and Logic Gates on Fibers.” YongWoo Choi, Ioannis Kymissis, Annie Wang, and Akintunde I. Akinwande, Materials Research Society Spring Meeting San Francisco, CA, April 2003

“Organic Field Emission Device Integrated with Organic Transistor.” I. Kymissis, A. I. Akinwande. International Electron Device Meeting, 2002, San Francisco, CA, December 2002.

“Field Emission from Organic Composites.” I. Kymissis, A. I. Akinwande. International Vacuum Microelectronics Conference 2002, Lyon, France, July 2002.

“Organic Conducting Composites for Field Emission Applications.” I. Kymissis, A. I. Akinwande. Materials Research Society Spring Meeting 2002, San Francisco, CA, April 2002.

“Novel CMP-based process for fabricating arrays of double-gated silicon field emitters.” L. Dvorson, I. Kymissis (presenting author), A. I. Akinwande. International Vacuum Microelectronics Conference 2001. Davis, CA. August 2001.

“Organic Semiconductor Thin-Film Field-Effect Transistors.” C. D. Dimitrakopoulos, J. Kymissis, S. Purushothaman, in Proceedings of The Int. Conf. on digital Printing Technologies, NIP16, Society of Imaging Science and Technology, Vancouver 2000, pp. 493-496.

“Organic transistors with low operating voltage and high mobility.” C. D. Dimitrakopoulos, S. Purushothaman, J. Kymissis, A. Callegari, D. A. Neumayer, P. R. Duncombe, R. B. Laibowitz, J. M. Shaw. Device Research Conference. Santa Barbara, CA 1999.

“Relatively Low Operating Voltage and High Field Effect Mobility Field Effect Transistors Based on Pentacene.” C. Dimitrakopoulos, S. Purushothaman, J. Kymissis, A. Callegari. Materials Research Society Fall Meeting, Boston, MA. December 1998.

“Parasitic power harvesting in shoes.” J. Kymissis, C. Kendall, J. Paradiso, N. Gershenfeld. IEEE Comput. Soc Digest of Papers. Second International Symposium on Wearable Computers 1998 Los Alamitos, CA.

SEMINARS
AND INVITED
PRESENTATIONS

Xerox (2014), UCLA (Material Science) (2014), NIST (2014), Princeton University (Mechanical Engineering) (2014), NC State (EE) (2013), Department of Physics, City College (2014), Cooper Union (2013), QDVision (2013), University of Michigan (2012), City College, Department of Chemistry, City University of New York (2012), City College, Department of Chemical Engineering, City University of New York (2012), General Electric Global Research Center (2012), Microsoft (2012), Plextronics (2012), University of Iowa (2012), UC Irvine (2012), Ecole Polytechnique (Montreal) (2012), University of Florida (2012), Cooper Union (2011), Stanford Research Institute (2011), University of Washington (2011), Wake Forest (2010), University of Delaware (2010), Queens College (2009), University of Puerto Rico Mayagues (2009), Yale University (2009), Seoul National University (2008), Samsung Mobile Display (2008), University of Connecticut (2008), Princeton University (2008), TASC/Elettra (2008), Columbia University MRSEC colloquium (2007), Rochester Institute of Technology (2007), Cornell MSE Colloquium (2005), Binghamton EE (2005) IEEE Expert Now online short course on organic field effect transistors (2006)

PATENTS (ISSUED) US Patent 8,835,941 “Displays including semiconductor nanocrystals and methods of making same” Seth Coe-Sullivan, Gregory V. Moeller, Vladimir Bulovic, Ioannis Kymissis. September 16, 2014

US Patent 8,750,517 “Friend or foe detection” Ioannis Kymissis. June 10, 2014

US Patent 8,472,758 “Optical structures including nanocrystals” Vladimir Bulovic, Ioannis Kymissis, Mounji Bawendi, Jonathan R. Tischler, Michael Scott Bradley, David Oertel, Jennifer Yu, June 25, 2013.

US Patent 8,470,617 “Composition including material, methods of depositing material, articles including same and systems for depositing material” Seth Coe-Sullivan, Maria J. Anc, LeeAnn Kim, John E. Ritter, Marshall Cox, Craig Breen, Vladimir Bulovic, Ioannis Kymissis, Robert Praino, Peter Kazlas, June 25, 2013.

US Patent 8,441,018 “Direct bandgap substrates and methods of making and using” I. Kymissis, V. W. Lee, May 14, 2013.

US Patent 7,955,766 “Software-controlled maskless optical lithography using fluorescence feedback” I. Kymissis, June 7, 2011.

US Patent 7,858,975 “Organic field effect transistor systems and methods” I. Kymissis, December 28, 2010.

US Patent 7,683,323 “Organic field effect transistor systems and methods” I. Kymissis, March 23, 2010.

US Patent 7,345,764 “Apparatus and method for a slim format spectrometer” Vladimir Bulovic, Conor Madigan, Ioannis Kymissis. March 18, 2008.

US Patent 6,870,312 “Organic Field Emission Device” I. Kymissis, A. I. Akinwande. March 22, 2005.

US Patent 6,569,707 “Method for improving performance of organic semiconductors in bottom electrode structure” C. D. Dimitrakopoulos, I. Kymissis (Primary Inventor), S. Purushothaman. May 2003.

US Patent 6,500,604. “Method for patterning sensitive organic thin films” C. D. Dimitrakopoulos, I. Kymissis (Primary Inventor), S. Purushothaman. December 2002

US Patent 6,335,539. “Method for improving performance of organic semiconductors in bottom electrode structure” C. D. Dimitrakopoulos, I. Kymissis (Primary Inventor), S. Purushothaman. January 2002.

US Patent 6,180,956. “Thin film transistors with organic-inorganic hybrid materials as semiconducting channels” K. Chondroudou, C. D. Dimitrakopoulos, C. R. Kagan (Primary Inventor), I. Kymissis, D. B. Mitzi. January 2001.

UNIVERSITY
LEADERSHIP

Columbia Maker Space Director (2014-2017) Nano Initiative co-chair (2014-present) Nano Initiative committee (2013-present) EFRC: Thrust leader and executive committee member (2008-2014) Institute for Data Sciences and Engineering: Space planning committee (2012-present) Columbia University Cleanroom Committee (2008-present), currently chair CISE executive committee (2012-present) NSEC: Outreach and education committee member (2008-2010) Columbia EHRS Faculty Working Group (2008-

present)

EXTERNAL
COMMITTEES

MRS: Symposium organizer 2015, 2013, 2011, 2009, 2007
DRC: GenChair 2014, TPC Chair 2013, TPC VC 2012, TPC member 2011
SPIE: Symposium organizer 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2003
LOPE-c: VP Americas/program committee 2014, 2013, 2012, 2011
IEEE/MRS/ACS Organic Electronics Workshop: Executive committee 2009-2011
SID-MAC Workshop on Organic and Thin Film Electronics, chair, 2009
CS/IEEE/MRS North East Regional Meeting, co-organizer, 2006
International Vacuum Nanoelectronics Conference: Local arrangements 2004

EDITORIAL
POSITIONS

Editor in Chief, Journal of the Society for Information Display (JSID). 2012-2015
Associate Editor, KIDS Journal of Information Display (KIDS JID). 2011-present
Associate Editor, IEEE Transactions on Electron Devices (IEEE TED). 2014-present

ELECTED
POSITIONS

IEEE EDS Regions 1-3 & 7 SRC Vice Chair; IEEE Electron Device Society. 2012-2015
Director, Society for Information Display, Mid Atlantic Chapter. 2012-2015
Chairman, EDS Vice-chair. IEEE New York Section Electron Device/Solid State Circuit Society Joint Chapter. 2007-present
Secretary, Treasurer, Vice-chair, Chair. Society for Information Display, Mid Atlantic Chapter. 2007-2011

GRADUATE THESES
SUPERVISED

Completed:

“Harvest,” School of Visual Arts, Damon Ahola, 2014 (MS)

“Organic photovoltaic device architectures,” Columbia University EE, Jonathan Beck 2013 (PhD)

“Systems for Pervasive Electronics and Interfaces”, Columbia University EE, John Sarik 2013 (PhD)

“Electrowetting on dielectrics”, Columbia University EE, Haig Norian (Co-supervised with Ken Shepard) 2013 (PhD)

“Processes and Materials for Organic Photovoltaics”, Columbia University EE, 2012, Marshall Cox. (PhD)

“Ultrasound Data Communications for Ultra-low-power Wake-up in Sensor Nodes”, Columbia University EE, 2012, Kshitij Yadav. Co-supervised with Peter Kinget. (PhD)

“Advanced Integration of Devices Enabled by Laser Crystallized Silicon”, Columbia University EE, 2012, Vincent Lee. (PhD)

“The Integration and Applications of Organic Thin Film Transistors and Ferroelectric Polymers” Columbia University EE, 2012, Yu-Jen Hsu. (PhD)

“Interfacial Studies in Organic Field-Effect Transistors”, Columbia University APAM, 2011, Zhang Jia. (PhD)

In progress:

Columbia University EE, Hassan Eddrees

Columbia University EE, Kostas Alexandrou,

Columbia University EE, Amrita Masurkar

Columbia University EE, Shyuan Yang

Columbia University EE, Fabio Carta

Columbia University EE, Aida Colon

Columbia University EE, Christopher Choi

Columbia University EE, Jose Bhanmode (with Harish Krishnaswamy)