Stanford

Alberto Salleo

Hong Seh and Vivian W. M. Lim Professor, Professor of Photon Science, and Senior Fellow at the Precourt Institute for Energy

Materials Science and Engineering

CONTACT INFORMATION

- **Administrator**

  Naomi Tudor - Administrative Associate

  Email ntudor@stanford.edu

Bio

BIO

Novel materials and processing techniques for large-area and flexible electronic/photonic devices. Polymeric materials for electronics, bioelectronics, and biosensors. Electrochemical devices for neuromorphic computing. Defects and structure/property studies of polymeric semiconductors, nano-structured and amorphous materials in thin films. Advanced characterization techniques for soft matter.

ACADEMIC APPOINTMENTS

- Professor, Materials Science and Engineering
- Professor, Photon Science Directorate
- Senior Fellow, Precourt Institute for Energy
- Member, Bio-X
- Affiliate, Precourt Institute for Energy
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Deputy Director for Science and Technology, SLAC National Accelerator Laboratory, (2025- present)
- Department Chair, Stanford University/Materials Science and Engineering, (2019-2025)

HONORS AND AWARDS

- Fellow, National Academy of Inventors (2024)
- Fellow, American Association for the Advancement of Science (2024)
- MRS Fellow, Materials Research Society (2023)
- Member of Academia Europaea, Academia Europaea (2022)
- Member of the European Academy of Sciences, EURASC (2021)
- Walter J. Gores Award for Excellence in Teaching, Stanford University (2016)
- Highly Cited Researcher in Materials Science, ISI/Clarivate (2015-)
- Tau Beta Pi Award for Excellence in Undergraduate Teaching, Stanford University (2013)

- Early Career Award, SPIE (2010)
- CAREER Award, NSF (2007-2011)
- Untenured Faculty Award, 3M (2007-2009)
- Outstanding Performance Award, PARC (2003, 2004)
- Award for Outstanding Students Abroad, Italian University Council (1997)
- John Tyssowski Memorial Fellow, UC Berkeley (1997)
- Fellow, Fulbright (1995-2000)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

PROFESSIONAL EDUCATION

- PhD, UC Berkeley , Materials Science (2001)

LINKS

- Lab Site: https://salleo.stanford.edu

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Novel materials and processing techniques for large-area and flexible electronic/photonic devices. Polymeric materials for electronics, bioelectronics, and biosensors. Electrochemical devices for neuromorphic computing. Defects and structure/property studies of polymeric semiconductors, nano-structured and amorphous materials in thin films. Advanced characterization techniques for soft matter.

Teaching

COURSES

2025-26

- Thermodynamics and Phase Equilibria: MATSCI 181 (Aut)
- Thermodynamics and Phase Equilibria: MATSCI 211 (Aut)

2024-25

- Thermodynamics and Phase Equilibria: MATSCI 181 (Aut)
- Thermodynamics and Phase Equilibria: MATSCI 211 (Aut)

2023-24

- Thermodynamics and Phase Equilibria: MATSCI 181 (Aut)
- Thermodynamics and Phase Equilibria: MATSCI 211 (Aut)

2022-23

- Thermodynamics and Phase Equilibria: MATSCI 181 (Aut)
- Thermodynamics and Phase Equilibria: MATSCI 211 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Michal Gala, Tyler Howard, Kelly Liu, Srikant Sagireddy, Max Schrock

Postdoctoral Faculty Sponsor

Changbai Li, Lucrezia Maini, Si En Ng, Yael Tsarfati, Qilun Zhang

Doctoral Dissertation Advisor (AC)

Ruth Arwani, Jaden Cramlet, Katherine Lei, Yeongmin Park, Kalee Rozylowicz, Jeremy Treiber

Doctoral Dissertation Co-Advisor (AC)

Daniel Cudzich, Mrinalni Iyer, Zhiqiao Jiang, Linda Lin, Nicholas Marchese, Alison Shad, Matti Thurston

Postdoctoral Research Mentor

Yael Tsarfati

Publications

PUBLICATIONS

- **Tuning polymer-backbone coplanarity and conformational order to achieve high-performance printed all-polymer solar cells.** *Nature communications*
  Wu, Y., Yuan, Y., Sorbelli, D., Cheng, C., Michalek, L., Cheng, H. W., Jindal, V., Zhang, S., LeCroy, G., Gomez, E. D., Milner, S. T., Salleo, A., Galli, et al
  2024; 15 (1): 2170
- **Charge Carrier Induced Structural Ordering And Disordering in Organic Mixed Ionic Electronic Conductors.** *Advanced materials (Deerfield Beach, Fla.)*
  Quill, T. J., LeCroy, G., Marks, A., Hesse, S. A., Thiburce, Q., McCulloch, I., Tassone, C. J., Takacs, C. J., Giovannitti, A., Salleo, A.
  2024: e2310157
- **Tuning the Mobility of Indacenodithiophene-Based Conjugated Polymers via Coplanar Backbone Engineering** *CHEMISTRY OF MATERIALS*
  Ji, X., Cheng, H., Schuster, N. J., LeCroy, G. S., Zhang, S., Wu, Y., Michalek, L., Nguyen, B. T., Chiong, J. A., Schrock, M., Tomo, Y., Rech, J., Salleo, et al
  2023; 36 (1): 256-265
- **The impact of hydrogen peroxide production in OECTs for in vitro applications** *JOURNAL OF MATERIALS CHEMISTRY C*
  Lubrano, C., Bettucci, O., Dijk, G., Salleo, A., Giovannitti, A., Santoro, F.
  2023
- **On the Potential of Optical Nanoantennas for Visibly Transparent Solar Cells** *ACS PHOTONICS*
  Qarony, W., Hossain, M., Tamang, A., Jovanov, V., Shahiduzzaman, M., Ahamed, M., Pala, R. A., Salleo, A., Tsang, Y., Knipp, D.
  2023; 10 (12): 4205-4214
- **Polaron absorption in aligned conjugated polymer films: breakdown of adiabatic treatments and going beyond the conventional mid-gap state model.** *Materials horizons*
  LeCroy, G., Ghosh, R., Untilova, V., Guio, L., Stone, K. H., Brinkmann, M., Luscombe, C., Spano, F. C., Salleo, A.
  2023
- **Origins of hydrogen peroxide selectivity during oxygen reduction on organic mixed ionic-electronic conducting polymers** *ENERGY & ENVIRONMENTAL SCIENCE*
  Duran, A., Liang, A., Denti, I., Yu, H., Pearce, D., Marks, A., Penn, E., Treiber, J., Weaver, K., Turaski, L., Maria, I. P., Griggs, S., Chen, et al
  2023
- **On the Importance of Chemical Precision in Organic Electronics: Fullerene Intercalation in Perfectly Alternating Conjugated Polymers** *ADVANCED FUNCTIONAL MATERIALS*
  Vanderspikken, J., Liu, Z., Wu, X., Beckers, O., Moro, S., Quill, T., Liu, Q., Goossens, A., Marks, A., Weaver, K., Hamid, M., Goderis, B., Nies, et al
  2023
- **Controlling swelling in mixed transport polymers through alkyl side-chain physical cross-linking.** *Proceedings of the National Academy of Sciences of the United States of America*
  Siemons, N., Pearce, D., Yu, H., Tuladhar, S. M., LeCroy, G. S., Sheelamanthula, R., Hallani, R. K., Salleo, A., McCulloch, I., Giovannitti, A., Frost, J. M., Nelson, J.

2023; 120 (35): e2306272120

- **Structural Study of Hydrated Organic Mixed Ionic Electronic Conductors Using Cryogenic 4D-STEM.** *Microscopy and microanalysis : the official journal of Microscopy Society of America, Microbeam Analysis Society, Microscopical Society of Canada*
  Tsarfati, Y., Bustillo, K. C., Savitzky, B. H., Ophus, C., McCulloch, I., Salleo, A., Minor, A. M.
  2023; 29 (Supplement_1): 264-265

- **Volumetric Electron Transfer from Metabolites to Chemically Doped Polymer Electrodes** *ADVANCED FUNCTIONAL MATERIALS*
  Tan, S., Lee, G., Rozylowicz, K., Marks, A., Salleo, A.
  2023

- **Multiparametric Sensing of Outer Membrane Vesicle-Derived Supported Lipid Bilayers Demonstrates the Specificity of Bacteriophage Interactions.** *ACS biomaterials science & engineering*
  Bali, K., McCoy, R., Lu, Z., Treiber, J., Savva, A., Kaminski, C. F., Salmond, G., Salleo, A., Mela, I., Monson, R., Owens, R. M.
  2023

- **Role of aggregates and microstructure of mixed-ionic-electronic-conductors on charge transport in electrochemical transistors.** *Materials horizons*
  LeCroy, G., Cendra, C., Quill, T. J., Moser, M., Hallani, R., Ponder, J. F., Stone, K., Kang, S. D., Liang, A. Y., Thiburce, Q., McCulloch, I., Spano, F. C., Giovannitti, et al
  2023

- **Tailoring the Surface Chemistry of PEDOT:PSS to Promote Supported Lipid Bilayer Formation** *MACROMOLECULAR MATERIALS AND ENGINEERING*
  Kallitsis, K., Pappa, A., Lu, Z., Alvarez-Fernandez, A., Charalambous, I., Schack, S., Traberg, W. C., Thiburce, Q., Bali, K., Christie, G., Guldin, S., Daniel, S., Salleo, et al
  2023

- **Linking Phase Behavior to Performance Parameters in Non-Fullerene Acceptor Solar Cells** *ADVANCED ENERGY MATERIALS*
  Cheng, C., Wong, S., LeCroy, G., Schneider, S., Gomez, E., Toney, M. F., Salleo, A.
  2023

- **An ordered, self-assembled nanocomposite with efficient electronic and ionic transport.** *Nature materials*
  Quill, T. J., LeCroy, G., Halat, D. M., Sheelamanthula, R., Marks, A., Grundy, L. S., McCulloch, I., Reimer, J. A., Balsara, N. P., Giovannitti, A., Salleo, A., Takacs, C. J.
  2023

- **Influence of Side Chain Interdigitation on Strain and Charge Mobility of Planar Indacenodithiophene Copolymers.** *ACS polymers Au*
  Sommerville, P. J., Balzer, A. H., Lecroy, G., Guio, L., Wang, Y., Onorato, J. W., Kukhta, N. A., Gu, X., Salleo, A., Stingelin, N., Luscombe, C. K.
  2023; 3 (1): 59-69

- **Closing the loop between microstructure and charge transport in conjugated polymers by combining microscopy and simulation.** *Proceedings of the National Academy of Sciences of the United States of America*
  Balhorn, L., MacPherson, Q., Bustillo, K. C., Takacs, C. J., Spakowitz, A. J., Salleo, A.
  2022; 119 (46): e2204346119

- **Influence of Side Chain Interdigitation on Strain and Charge Mobility of Planar Indacenodithiophene Copolymers** *ACS POLYMERS AU*
  Sommerville, P. J. W., Balzer, A. H., Lecroy, G., Guio, L., Wang, Y., Onorato, J. W., Kukhta, N. A., Gu, X., Salleo, A., Stingelin, N., Luscombe, C. K.
  2022

- **Wafer-scale microfabrication of flexible organic electrochemical transistors** *FLEXIBLE AND PRINTED ELECTRONICS*
  Thiburce, Q., Melosh, N., Salleo, A.
  2022; 7 (3)

- **Impact of Side Chain Hydrophilicity on Packing, Swelling and Ion Interactions in Oxy-bithiophene Semiconductors.** *Advanced materials (Deerfield Beach, Fla.)*
  Siemons, N., Pearce, D., Cendra, C., Yu, H., Tuladhar, S. M., Hallani, R. K., Sheelamanthula, R., LeCroy, G. S., Siemons, L., White, A. J., Mcculloch, I., Salleo, A., Frost, et al
  2022: e2204258

- **Simultaneous Performance and Stability Improvement of a p-Type Organic Electrochemical Transistor through Additives** *CHEMISTRY OF MATERIALS*

Castillo, T., Moser, M., Cendra, C., Nayak, P., Salleo, A., McCulloch, I., Inal, S.
2022

- **Conjugated polymers for microwave applications: untethered sensing platforms and multifunctional devices.** *Advanced materials (Deerfield Beach, Fla.)*
  Tan, S. T., Giovannitti, A., Marks, A., Moser, M., Quill, T. J., McCulloch, I., Salleo, A., Bonacchini, G. E.
  2022: e2202994

- **Tuning Organic Electrochemical Transistor Threshold Voltage using Chemically Doped Polymer Gates.** *Advanced materials (Deerfield Beach, Fla.)*
  Tan, S. T., Lee, G., Denti, I., LeCroy, G., Rozylowicz, K., Marks, A., Griggs, S., McCulloch, I., Giovannitti, A., Salleo, A.
  2022: e2202359

- **Enhancing and Extinguishing the Different Emission Features of 2D (EA(1-)(x)FA(x))(4)Pb3Br10 Perovskite Films** *ADVANCED OPTICAL MATERIALS*
  Kennard, R. M., Dahlman, C. J., Morgan, E. E., Chung, J., Cotts, B. L., Kincaid, J. R. A., DeCrescent, R. A., Stone, K. H., Panuganti, S., Mohtashami, Y., Mao, L., Schaller, R. D., Salleo, et al
  2022

- **Efficient Electronic Tunneling Governs Transport in Conducting Polymer-Insulator Blends.** *Journal of the American Chemical Society*
  Keene, S. T., Michaels, W., Melianas, A., Quill, T. J., Fuller, E. J., Giovannitti, A., McCulloch, I., Talin, A. A., Tassone, C. J., Qin, J., Troisi, A., Salleo, A.
  2022

- **Critical analysis of self-doping and water-soluble n-type organic semiconductors: structures and mechanisms** *JOURNAL OF MATERIALS CHEMISTRY C*
  Cowen, L. M., Gilhooly-Finn, P. A., Giovannitti, A., LeCroy, G., Demetriou, H., Neal, W., Dong, Y., Westwood, M., Luong, S., Fenwick, O., Salleo, A., Heutz, S., Nielsen, et al
  2022

- **Understanding electrochemical properties of supported lipid bilayers interfaced with organic electronic devices** *JOURNAL OF MATERIALS CHEMISTRY C*
  Lu, Z., van Niekerk, D., Savva, A., Kallitsis, K., Thiburce, Q., Salleo, A., Pappa, A., Owens, R. M.
  2022

- **Mixed Ionic-Electronic Conduction, a Multifunctional Property in Organic Conductors.** *Advanced materials (Deerfield Beach, Fla.)*
  Tan, S. T., Gumyusenge, A., Quill, T. J., LeCroy, G. S., Bonacchini, G. E., Denti, I., Salleo, A.
  2022: e2110406

- **Beyond Tristimulus Color Vision with Perovskite-Based Multispectral Sensors.** *ACS applied materials & interfaces*
  Qarony, W., Khan, H. A., Hossain, M. I., Kozawa, M., Salleo, A., Hardeberg, J. Y., Fujiwara, H., Tsang, Y. H., Knipp, D.
  2022

- **High-Performance Humidity Sensing in pi-Conjugated Molecular Assemblies through the Engineering of Electron/Proton Transport and Device Interfaces.** *Journal of the American Chemical Society*
  Turetta, N., Stoeckel, M., Furlan de Oliveira, R., Devaux, F., Greco, A., Cendra, C., Gullace, S., Gicevicius, M., Chattopadhyay, B., Liu, J., Schweicher, G., Sirringhaus, H., Salleo, et al
  2022

- **Impedance sensing of antibiotic interactions with a pathogenic E. coli outer membrane supported bilayer.** *Biosensors & bioelectronics*
  Ghosh, S., Mohamed, Z., Shin, J., Bint E Naser, S. F., Bali, K., Dorr, T., Owens, R. M., Salleo, A., Daniel, S.
  2022; 204: 114045

- **Nanoscopic Electrolyte-Gated Vertical Organic Transistors with Low Operation Voltage and Five Orders of Magnitude Switching Range for Neuromorphic Systems.** *Nano letters*
  Eckel, C., Lenz, J., Melianas, A., Salleo, A., Weitz, R. T.
  1800

- **Quantifying Polaron Mole Fractions and Interpreting Spectral Changes in Molecularly Doped Conjugated Polymers** *ADVANCED ELECTRONIC MATERIALS*
  Moule, A. J., Gonel, G., Murrey, T. L., Ghosh, R., Saska, J., Shevchenko, N. E., Denti, I., Fergerson, A. S., Talbot, R. M., Yacoub, N. L., Mascal, M., Salleo, A., Spano, et al

2021

- **Conjugated polymers with controllable interfacial order and energetics enable tunable heterojunctions in organic and colloidal quantum dot photovoltaics** *JOURNAL OF MATERIALS CHEMISTRY A*
  Zhong, Y., Kirmani, A. R., Lan, X., Carpenter, J., Chew, A., Awartani, O., Yu, L., Niazi, M. R., Voznyy, O., Hu, H., Ndjawa, G., Tietze, M. L., Salleo, et al
  2021

- **Organic neuromorphic electronics for sensorimotor integration and learning in robotics.** *Science advances*
  Krauhausen, I., Koutsouras, D. A., Melianas, A., Keene, S. T., Lieberth, K., Ledanseur, H., Sheelamanthula, R., Giovannitti, A., Torricelli, F., Mcculloch, I., Blom, P. W., Salleo, A., van de Burgt, et al
  2021; 7 (50): eabl5068

- **High-Speed Ionic Synaptic Memory Based on 2D Titanium Carbide MXene** *ADVANCED FUNCTIONAL MATERIALS*
  Melianas, A., Kang, M., VahidMohammadi, A., Quill, T., Tian, W., Gogotsi, Y., Salleo, A., Hamedi, M.
  2021

- **Detection of Ganglioside-Specific Toxin Binding with Biomembrane-Based Bioelectronic Sensors.** *ACS applied bio materials*
  Bint E Naser, S. F., Su, H., Liu, H. Y., Manzer, Z. A., Chao, Z., Roy, A., Pappa, A. M., Salleo, A., Owens, R. M., Daniel, S.
  2021; 4 (11): 7942-7950

- **Detection of Ganglioside-Specific Toxin Binding with Biomembrane-Based Bioelectronic Sensors** *ACS APPLIED BIO MATERIALS*
  Naser, S. E., Su, H., Liu, H., Manzer, Z. A., Chao, Z., Roy, A., Pappa, A., Salleo, A., Owens, R. M., Daniel, S.
  2021; 4 (11): 7942-7950

- **Reversible photochromic and photoluminescence in iodide perovskites** *THIN SOLID FILMS*
  Qarony, W., Hossain, M., Hossain, M., Zeng, L., Ma, S., Yu, K., Salleo, A., Knipp, D., Yip, C., Tsang, Y.
  2021; 737

- **Functional Infectious Nanoparticle Detector: Finding Viruses by Detecting Their Host Entry Functions Using Organic Bioelectronic Devices.** *ACS nano*
  Tang, T., Savva, A., Traberg, W. C., Xu, C., Thiburce, Q., Liu, H., Pappa, A., Martinelli, E., Withers, A., Cornelius, M., Salleo, A., Owens, R. M., Daniel, et al
  2021

- **Improving molecular alignment and charge percolation in semiconducting polymer films with highly localized electronic states through tailored thermal annealing** *JOURNAL OF MATERIALS CHEMISTRY C*
  Luzio, A., Martin, J., Cheng, C. H., Stingelin, N., Toney, M. F., Salleo, A., Caironi, M.
  2021

- **Unraveling the Unconventional Order of a High-Mobility Indacenodithiophene-Benzothiadiazole Copolymer.** *ACS macro letters*
  Cendra, C., Balhorn, L., Zhang, W., O'Hara, K., Bruening, K., Tassone, C. J., Steinrück, H. G., Liang, M., Toney, M. F., McCulloch, I., Chabinyc, M. L., Salleo, A., Takacs, et al
  2021; 10 (10): 1306-1314

- **Unraveling the Unconventional Order of a High-Mobility Indacenodithiophene-Benzothiadiazole Copolymer** *ACS MACRO LETTERS*
  Cendra, C., Balhorn, L., Zhang, W., O'Hara, K., Bruening, K., Tassone, C. J., Steinrueck, H., Liang, M., Toney, M. F., McCulloch, I., Chabinyc, M. L., Salleo, A., Takacs, et al
  2021; 10 (10): 1306-1314

- **Redox-Active Polymers Designed for the Circular Economy of Energy Storage Devices** *ACS ENERGY LETTERS*
  Tan, S., Quill, T. J., Moser, M., LeCroy, G., Chen, X., Wu, Y., Takacs, C. J., Salleo, A., Giovannitti, A.
  2021; 6 (10): 3450-3457

- **Growth-Controlled Broad Emission in Phase-Pure Two-Dimensional Hybrid Perovskite Films** *CHEMISTRY OF MATERIALS*
  Kennard, R. M., Dahlman, C. J., Chung, J., Cotts, B. L., Mikhailovsky, A. A., Mao, L., DeCrescent, R. A., Stone, K. H., Venkatesan, N. R., Mohtashami, Y., Assadi, S., Salleo, A., Schuller, et al
  2021; 33 (18): 7290-7300

- **Ion Pair Uptake in Ion Gel Devices Based on Organic Mixed Ionic-Electronic Conductors** *ADVANCED FUNCTIONAL MATERIALS*
  Quill, T. J., LeCroy, G., Melianas, A., Rawlings, D., Thiburce, Q., Sheelamanthula, R., Cheng, C., Tuchman, Y., Keene, S. T., McCulloch, I., Segalman, R. A., Chabinyc, M. L., Salleo, et al

2021

- **Band-Gap-Engineered Transparent Perovskite Solar Modules to Combine Photovoltaics with Photosynthesis.** *ACS applied materials & interfaces*
  Weng, S., Tamang, A., Salleo, A., Fujiwara, H., Nakamura, M., Zhang, Y., Knipp, D.
  2021
- **Operation mechanism of organic electrochemical transistors as redox chemical transducers** *JOURNAL OF MATERIALS CHEMISTRY C*
  Tan, S., Keene, S., Giovannitti, A., Melianas, A., Moser, M., McCulloch, I., Salleo, A.
  2021
- **Electronic Doping and Enhancement of n-Channel Polycrystalline OFET Performance through Gate Oxide Modifications with Aminosilanes** *ADVANCED MATERIALS INTERFACES*
  Shin, N., Schellhammer, K., Lee, M., Zessin, J., Hambsch, M., Salleo, A., Ortmann, F., Mannsfeld, S. C. B.
  2021
- **A Stacked Hybrid Organic/Inorganic Electrochemical Random-Access Memory for Scalable Implementation** *ADVANCED ELECTRONIC MATERIALS*
  Tuchman, Y., Quill, T. J., LeCroy, G., Salleo, A.
  2021
- **Controlling Electrochemically Induced Volume Changes in Conjugated Polymers by Chemical Design: from Theory to Devices** *ADVANCED FUNCTIONAL MATERIALS*
  Moser, M., Gladisch, J., Ghosh, S., Hidalgo, T., Ponder, J. F., Sheelamanthula, R., Thiburce, Q., Gasparini, N., Wadsworth, A., Salleo, A., Inal, S., Berggren, M., Zozoulenko, et al
  2021
- **Dynamic lattice distortions driven by surface trapping in semiconductor nanocrystals.** *Nature communications*
  Guzelturk, B., Cotts, B. L., Jasrasaria, D., Philbin, J. P., Hanifi, D. A., Koscher, B. A., Balan, A. D., Curling, E., Zajac, M., Park, S., Yazdani, N., Nyby, C., Kamysbayev, et al
  2021; 12 (1): 1860
- **High-Gain Chemically Gated Organic Electrochemical Transistor** *ADVANCED FUNCTIONAL MATERIALS*
  Tan, S., Giovannitti, A., Melianas, A., Moser, M., Cotts, B. L., Singh, D., McCulloch, I., Salleo, A.
  2021
- **In situ Parallel Training of Analog Neural Network Using Electrochemical Random-Access Memory.** *Frontiers in neuroscience*
  Li, Y., Xiao, T. P., Bennett, C. H., Isele, E., Melianas, A., Tao, H., Marinella, M. J., Salleo, A., Fuller, E. J., Talin, A. A.
  2021; 15: 636127
- **Materials Strategies for Organic Neuromorphic Devices** *ANNUAL REVIEW OF MATERIALS RESEARCH, VOL 51, 2021*
  Gumyusenge, A., Melianas, A., Keene, S. T., Salleo, A.
  edited by Clarke, D. R.
  2021; 51: 47-71
- **Altered heparan sulfate metabolism during development triggers dopamine-dependent autistic-behaviours in models of lysosomal storage disorders.** *Nature communications*
  De Risi, M., Tufano, M., Alvino, F. G., Ferraro, M. G., Torromino, G., Gigante, Y., Monfregola, J., Marrocco, E., Pulcrano, S., Tunisi, L., Lubrano, C., Papy-Garcia, D., Tuchman, et al
  2021; 12 (1): 3495
- **Electrolyte-gated transistors for enhanced performance bioelectronics.** *Nature reviews. Methods primers*
  Torricelli, F., Adrahtas, D. Z., Bao, Z., Berggren, M., Biscarini, F., Bonfiglio, A., Bortolotti, C. A., Frisbie, C. D., Macchia, E., Malliaras, G. G., McCulloch, I., Moser, M., Nguyen, et al
  2021; 1
- **How is flexible electronics advancing neuroscience research?** *Biomaterials*
  Chen, Y., Rommelfanger, N. J., Mahdi, A. I., Wu, X., Keene, S. T., Obaid, A., Salleo, A., Wang, H., Hong, G.
  2020; 268: 120559
- **Brush-Painted Solar Cells from Pre-Crystallized Components in a Nonhalogenated Solvent System Prepared by a Simple Stirring Technique** *MACROMOLECULES*

Nguyen, N. A., Himmelberger, S., Salleo, A., Mackay, M. E.
2020; 53 (19): 8276–85

- **Perovskite Color Detectors: Approaching the Efficiency Limit.** *ACS applied materials & interfaces*
  Hossain, M. I., Khan, H. A., Kozawa, M., Qarony, W., Salleo, A., Hardeberg, J. Y., Fujiwara, H., Tsang, Y. H., Knipp, D.
  2020
- **Reversible Doping and Photo Patterning of Polymer Nanowires** *ADVANCED ELECTRONIC MATERIALS*
  Bedolla-Valdez, Z. I., Xiao, R., Cendra, C., Fergerson, A. S., Chen, Z., Gonel, G., Salleo, A., Yu, D., Moule, A. J.
  2020
- **Towards biomimetic electronics that emulate cells** *MRS COMMUNICATIONS*
  Lubrano, C., Matrone, G., Forro, C., Jahed, Z., Offenhaeusser, A., Salleo, A., Cui, B., Santoro, F.
  2020; 10 (3): 398–412
- **Combining Photosynthesis and Photovoltaics: A Hybrid Energy-Harvesting System Using Optical Antennas.** *ACS applied materials & interfaces*
  Tamang, A., Parsons, R., Lertchaiwarakul, C., Palanchoke, U., Kojima, H., Salleo, A., Nakamura, M., Knipp, D.
  2020
- **Side Chain Redistribution as a Strategy to Boost Organic Electrochemical Transistor Performance and Stability.** *Advanced materials (Deerfield Beach, Fla.)*
  Moser, M., Hidalgo, T. C., Surgailis, J., Gladisch, J., Ghosh, S., Sheelamanthula, R., Thiburce, Q., Giovannitti, A., Salleo, A., Gasparini, N., Wadsworth, A., Zozoulenko, I., Berggren, et al
  2020: e2002748
- **Organic neuromorphic devices: Past, present, and future challenges** *MRS BULLETIN*
  Tuchman, Y., Mangoma, T. N., Gkoupidenis, P., van de Burgt, Y., John, R., Mathews, N., Shaheen, S. E., Daly, R., Malliaras, G. G., Salleo, A.
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