

- P36.** "Dynamic mosaicity modulates ion transport in stimuli-responsive liquid crystal electrolytes", H. Pung, C.Y. Okada-Junior, M. Simões Santos, M. Mirolo, I. Morfin, G. Chahine, J. Duchet-Rumeau, J. Jacquemin, A. Padua, S. Livi, **P. Rannou**, M. Maréchal, *Adv. Sci.* **12**, e10610 (2025). <https://dx.doi.org/10.1002/advs.202510610>
- P35.** L-A. Lozano-Hernández, **P. Rannou**, Y. Bonnassieux, S. Sanaur "A universal method for achieving ultra-low contact resistances in organic electrochemical transistors" *Adv. Mater. Interfaces* **12**, e00208 (2025). <https://dx.doi.org/10.1002/admi.202500208>
- P34.** "Controlling the nematic liquid crystallinity of cellulose nanocrystals with an alcohol ethoxy sulfonate surfactant", J. Majoinen, L. Gustavsson, O. Wani, S. Kiefer, V. Liljeström, O.J. Rojas, **P. Rannou**, O. Ikkala, *Biomacromolecules* **25**, 3909-3919 (2024). <https://dx.doi.org/10.1021/acs.biomac.3c01375>
- P33.** "Heating-induced switching to hierarchical liquid crystallinity combining colloidal and molecular order in zwitterionic molecules", L. Gustavsson, Z-P. Lv, T. Cherian, W. Seppälä, V. Liljeström, B. Peng, S. Huotari, **P. Rannou**, O. Ikkala *ACS Omega* **8**, 39345-39353 (2023). <https://dx.doi.org/10.1021/acsomega.3c04914>
- P32.** "Impact of charge carrier injection/extraction performances in low-dimension PEDOT:PSS organic electrochemical transistors", G. Sych, **P. Rannou**, M. Jullien-Palletier, S. Sadki, Y. Bonnassieux, S. Sanaur. *Adv. Electron. Mater.* **9**, 2201067 (2023). <https://dx.doi.org/10.1002/aelm.202201067>
- P31.** "Unidirectional perpendicularly aligned lamella-structured oligosaccharide (A) ABA triblock elastomer (B) thin films utilizing triazolium⁺/TFSI⁻ ionic nanochannels", J. Majoinen, C. Bouilhac, **P. Rannou**, R. Borsali. *ACS Macro Lett.* **11**, 140-148 (2022). <https://dx.doi.org/10.1021/acsmacrolett.1c00712>
- P30.** "Interfacial compatibilization in ternary polymer nanocomposites: Comparing theory and experiments", M. Maguire, N.M. Krook, A. Kulshreshtha, C.R. Bilchak, R. Brosnan, A-M. Pana, **P. Rannou**, M. Maréchal, K. Ohno, A. Jayaraman, R.J. Composto, *Macromolecules* **54**, 797-811 (2021). <https://dx.doi.org/10.1021/acs.macromol.0c02345>
- P29.** "Organic liquid crystals as single-ion Li⁺ conductors", D. Bresser, M. Leclere, L. Bernard, **P. Rannou**, H. Mendil-Jakani, G-T. Kim, T. Zinkevich, S. Indris, G. Gebel, S. Lyonard, L. Picard, *ChemSusChem* **14**, 655-661 (2021). <https://dx.doi.org/10.1002/cssc.202001995>
- P28.** "Supramolecular self-assembly of ultraconfined ionic liquids for fast anisotropic ion transport", T. Cherian, D. Rosa Nunes, T.G. Dane, J. Jacquemin, U. Vainio, T. Myllymäki, J. Timonen, N. Houbenov, M. Maréchal, **P. Rannou**, O. Ikkala. *Adv. Funct. Mater.* **29**, 1905054 (2019). <https://dx.doi.org/10.1002/adfm.201905054>
- P27.** "Lyotropic liquid crystals and linear supramolecular polymers of end-functionalized oligosaccharides", T.T.T. Myllymäki, A. Guliyeva, A. Korpi, M.A. Kostianen, V. Hynninen, Nonappa, **P. Rannou**, O. Ikkala, S. Halila, *Chem. Commun.* **55**, 11739-11742 (2019). <https://dx.doi.org/10.1039/C9CC04715H>
- P26.** "UV-Vis-NIR optical properties of amyloid fibrils as a new light on amyloidogenesis", J. Pansieri, V. Josserand, S-J. Lee, A. Rongier, D. Imbert, M. Moulin Sallanon, E. Kövari, T. Dane, C. Vendrely, O. Chaix-Pluchery, M. Guidetti, J. Vollaie, A. Fertin, Y. Usson, **P. Rannou**, J-L.Coll, C. Marquette, V. Forge. *Nat. Photon.* **13**, 473-479 (2019) <https://dx.doi.org/10.1038/s41566-019-0422-6>
- P25.** "Alignment of Nanoplates in lamellar diblock copolymer domains and the effect of particle volume fraction on phase behavior", N.M. Krook, J. Ford, M. Maréchal, **P. Rannou**, J.S. Meth, C.B. Murray, R.J. Composto. *ACS. Macro. Lett.* **7**, 1400-1407 (2018). <https://dx.doi.org/10.1021/acsmacrolett.8b00665>
- P24.** "Self-assembled highly ordered acid layers in precisely sulfonated polyethylene produce efficient proton transport", E.B. Trigg, T.W. Gaines, M. Maréchal, D.E. Moed, **P. Rannou**, K.B. Wagener, M.J. Stevens, K.I. Winey, *Nat. Mater.* **17**, 725-731 (2018). <https://dx.doi.org/10.1038/s41563-018-0097-2>
- P23.** "Dynamic self-assembly of DNA minor groove-binding ligand DB921 into nanotube triggered by an alkali halide", R. Mizuta, J.M. Devos, J. Webster, W.L. Ling, R. Narayanan, A. Round, D. Munnir, E. Moussu, A.A. Frahat, D.W. Boykin, W.D. Wilson, S. Neidle, R. Schweins, **P. Rannou**, M. Harertlein, V.T. Forsyth, E.P. Mitchell, *Nanoscale* **10**, 5550-5508 (2018). <https://dx.doi.org/10.1039/C7NR03875E>
- P22.** "Unveiling the ion conduction mechanism in imidazolium-based poly(ionic liquids): A comprehensive investigation of the structure-to-transport interplay", V. Delhorbe, D. Bresser, H. Mendil-Jakani, **P. Rannou**, L. Bernard, T. Gutel, S. Lyonard, L. Picard, *Macromolecules* **50**, 4309-4321 (2017). <https://dx.doi.org/10.1021/acs.macromol.7b00197>
- P21.** "Self-Assembly of carbohydrate-block-Poly(3-hexylthiophene) diblock copolymer into sub-10 nm scale lamellar structures", Y. Sakai-Otsuka, S. Zaioncz, I. Otsuka, S. Halila, **P. Rannou**, R. Borsali, *Macromolecules* **50**, 3365-3376 (2017). <https://dx.doi.org/10.1021/acs.macromol.7b00118>
- P20.** "A synthetic redox biofilm made from metalloprotein-prion domain chimera nanowires", L. Altamura, C. Horvath, S. Rengaraj, A. Rongier, K. Elouarzaki, C. Gondran, A.L.B. Maçon, C. Vendrely, V. Bouchiat, M. Fontecave, D. Mariolle, **P. Rannou**, A. Le Goff, N. Duraffourg, M. Holzinger, V. Forge, *Nat. Chem.* **9**, 157-163 (2016). <https://dx.doi.org/10.1038/nchem.2616>
- P19.** "Exploring redox states, doping and ordering of electroactive star-shaped oligo(aniline)s", B.M. Mills, N. Fey, T. Marszalek, W. Pisula, **P. Rannou**, C. F. J. Faul, *Chem. Eur. J.* **22**, 16950-16956 (2016). <https://dx.doi.org/10.1002/chem.201603527>
- P18.** "Tuning optical properties of functionalized gold nanorods through controlled interactions with organic semiconductors", R.C. Ferrier Jr, G. Gines, D. Gasparutto, B. Pépin-Donat, **P. Rannou**, R.J. Composto, *J. Phys. Chem. C* **119**, 17899-17909 (2015). <https://dx.doi.org/10.1021/acs.jpcc.5b04785>
- P17.** "Tuning structure and function in tetra(aniline)-based rod-coiled-rod architectures", C.U. Udeh, **P. Rannou**, B.P. Brown, J.O. Thomas, C.F.J. Faul, *J. Mater. Chem. C* **1**, 6428-6437 (2013). <https://dx.doi.org/10.1039/C3TC31088D>

- P16.** "The Influence of polymer purification on photovoltaic device performance of a series of indacenodithiophene donor polymers", R.S. Ashraf, B.C. Schroeder, H.A. Bronstein, Z. Huang, S. Thomas, R.J. Kline, C.J. Brabec, **P. Rannou**, T.D. Anthopoulos, J.R. Durrant, I. McCulloch, *Adv. Mater.* **25**, 2029-2034 (2013). <https://dx.doi.org/10.1002/adma.201300027>
- P15.** "Double smectic self-assembly in block copolypeptide complexes", J.S. Haatja, N. Houbenov, H. Iatrou, N. Hadjichristidis, A. Karatzas, C.F.J. Faul, **P. Rannou**, O. Ikkala, *Biomacromolecules* **13**, 3572-3580 (2012). <https://dx.doi.org/10.1021/bm3010275>
- P14.** "Donnor-Acceptor alternating copolymers containing thienopyrroledione electron accepting units: Preparation, redox behaviour, and application to photovoltaic cells", C. Ottone, P. Berrouard, G. Louarn, S. Beaupré, D. Gendron, M. Zagorska, **P. Rannou**, A. Najari, S. Sadki, M. Leclerc, A. Pron., *Polym. Chem.* **3**, 2355-2365 (2012). <https://dx.doi.org/10.1039/C2PY20064C>
- P13.** "Influence of polymorphism on charge transport properties in isomers of fluorenone-based liquid crystalline semiconductors", F. Lincker, A-J. Attias, F. Mathevet, B. Heinrich, B. Donnio, J-L. Fave, **P. Rannou**, R. Demadrille, *Chem. Commun.* **48**, 3209-3211 (2012). <https://dx.doi.org/10.1039/C2CC17276C>
- P12.** "Delineating poly(aniline) redox chemistry using tailored oligo(aryleneamine)s: Towards oligo(aniline)-based organic semiconductors with tunable optoelectronic properties ", Z. Shao, **P. Rannou**, S. Sadki, N. Fey, D.M. Lindsay, C.F.J. Faul, *Chem. Eur. J.* **17**, 12512-12521 (2011). <https://dx.doi.org/10.1002/chem.201101697>
- P11.** "Fluorenone core donor-acceptor-donor pi-conjugated molecules end-capped with dendritic oligo(thiophene)s: Preparation, liquid crystalline behaviour, and photovoltaic applications", F. Lincker, B. Heinrich, R. De Bettignies, **P. Rannou**, J. Pécaut, B. Grévin, A. Pron, B. Donnio, R. Demadrille, *J. Mater. Chem.* **21**, 5238-5247 (2011). <https://dx.doi.org/10.1021/ma9021604>
- P10.** "Self-assembly and hierarchies in pyridine-containing homopolymers and block copolymers with hydrogen-bonded cholesteric side-chains", J.T. Korhonen, T. Verho, **P. Rannou**, O. Ikkala, *Macromolecules* **43**, 1507-1514 (2010). <https://dx.doi.org/10.1021/ma9021604>
- P9.** "Molecular weight dependence of chain packing and semicrystalline structure in oriented films of regioregular poly(3-hexylthiophene) revealed by high resolution Transmission Electron Microscopy", M. Brinkmann & **P. Rannou**, *Macromolecules* **42**, 1125-1130 (2009). <https://dx.doi.org/10.1021/ma8023415>
- P8.** "Probing local electronic transport at the single crystal/dielectric interface", Y. Luo, F. Gustavo, J.-H. Henry, F. Mathevet, F. Lefloch, M. Sanquer, **P. Rannou**, B. Grévin, *Adv. Mater.* **19**, 2267-2273 (2007). <https://dx.doi.org/10.1002/adma.200700913>
- P7.** "Effect of molecular weight on the structure and morphology of oriented thin films of regioregular poly(3-hexylthiophene) grown by directional epitaxial solidification", M. Brinkmann & **P. Rannou**, *Adv. Funct. Mater.* **17**, 101-108 (2007). <https://dx.doi.org/10.1002/adfm.200600673>
- P6.** "Probing the electronic properties of self-organized poly(3-dodecylthiophene) monolayers by two-dimensional scanning tunneling spectroscopy imaging at the single chain scale", L. Scifo, M. Dubois, M. Brun, **P. Rannou**, S. Latil, A. Rubio, B. Grévin, *NanoLett.* **6**, 1711-1718 (2006). <https://dx.doi.org/10.1021/nl061018w>
- P5.** "Grafting of oligoaniline on CdSe nanocrystals: Spectroscopic, electrochemical, and spectroelectrochemical properties of the resulting organic/inorganic hybrid", C. Querner, P. Reiss, M. Zagorska, O. Renaud, R. Payerne, F. Genoud, **P. Rannou**, A. Pron, *J. Mater. Chem.* **15**, 554-563 (2005). <https://dx.doi.org/10.1039/B413183E>
- P4.** "Electrochemistry: Arrays of polymer nanowires", B. Grévin & **P. Rannou**, *Nat. Mater.* **3**, 503-504 (2004): **Invited News & Views.** <https://dx.doi.org/10.1038/nmat1173>
- P3.** "Multi-scale scanning tunnelling microscopy study of self-assembly phenomena in two-dimensional polycrystals of π -conjugated polymers: The case of regioregular poly(dioctylbithiophene-*alt*-fluorenone)", M. Brun, R. Demadrille, **P. Rannou**, A. Pron, J.P. Travers, B. Grévin. *Adv. Mater.* **16**, 2087-2092 (2004). <https://dx.doi.org/10.1002/adma.200400088>
- P2.** "Low Tg, stretchable polyaniline of metallic type conductivity: The role of dopant engineering in the control of supramolecular organization and in the tuning of its properties", B. Dufour, **P. Rannou**, D. Djurado, H. Janeczek, M. Zagorska, A. de Geyer, J.P. Travers, A. Pron, *Chem. Mater.* **15**, 1587-1592 (2003). <https://dx.doi.org/10.1021/cm021354n>
- P1.** "Processible conjugated polymers: From organic semiconductors to organic metals and superconductors", **P. Rannou** & A. Pron, *Prog. Polym. Sci.* **27**, 135-190 (2002): **Invited Review.** [https://dx.doi.org/10.1016/S0079-6700\(01\)00043-0](https://dx.doi.org/10.1016/S0079-6700(01)00043-0)