# Edwin Jager

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3387617/publications.pdf

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|---|---|---|---|
| 94<br>papers | 5,546<br>citations | 109321<br>35<br>h-index | 98798<br>67<br>g-index |
| 98<br>all docs | 98<br>docs citations | 98<br>times ranked | 6396<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Microfabricating Conjugated Polymer Actuators. , 2000, 290, 1540-1545. | | 848 |
| 2 | Microrobots for Micrometer-Size Objects in Aqueous Media: Potential Tools for Single-Cell Manipulation. Science, 2000, 288, 2335-2338. | 12.6 | 547 |
| 3 | New materials for micro-scale sensors and actuators. Materials Science and Engineering Reports, 2007, 56, 1-129. | 31.8 | 438 |
| 4 | Organic electronics for precise delivery of neurotransmitters to modulate mammalian sensory function. Nature Materials, 2009, 8, 742-746. | 27.5 | 314 |
| 5 | Knitting and weaving artificial muscles. Science Advances, 2017, 3, e1600327. | 10.3 | 278 |
| 6 | Label-free impedimetric biosensor for Salmonella Typhimurium detection based on poly [pyrrole-co-3-carboxyl-pyrrole] copolymer supported aptamer. Biosensors and Bioelectronics, 2016, 80, 194-200. | 10.1 | 195 |
| 7 | Conjugated Polymer Actuators and Devices: Progress and Opportunities. Advanced Materials, 2019, 31, e1808210. | 21.0 | 130 |
| 8 | Plasmonic Metasurfaces with Conjugated Polymers for Flexible Electronic Paper in Color. Advanced Materials, 2016, 28, 9956-9960. | 21.0 | 128 |
| 9 | Electrochemical modulation of epithelia formation using conducting polymers. Biomaterials, 2009, 30, 6257-6264. | 11.4 | 121 |
| 10 | Electrochemical bacterial detection using poly(3-aminophenylboronic acid)-based imprinted polymer. Biosensors and Bioelectronics, 2017, 93, 87-93. | 10.1 | 117 |
| 11 | Translating Electronic Currents to Precise Acetylcholineâ€“Induced Neuronal Signaling Using an Organic Electrophoretic Delivery Device. Advanced Materials, 2009, 21, 4442-4446. | 21.0 | 110 |
| 12 | Nano-fiber scaffold electrodes based on PEDOT for cell stimulation. Sensors and Actuators B: Chemical, 2009, 142, 451-456. | 7.8 | 110 |
| 13 | Electronic Control of Cell Detachment Using a Selfâ€Doped Conducting Polymer. Advanced Materials, 2011, 23, 4403-4408. | 21.0 | 107 |
| 14 | Mechanical stimulation of epithelial cells using polypyrrole microactuators. Lab on A Chip, 2011, 11, 3287. | 6.0 | 100 |
| 15 | Direct Mechanical Stimulation of Stem Cells: A Beating Electromechanically Active Scaffold for Cardiac Tissue Engineering. Advanced Healthcare Materials, 2016, 5, 1471-1480. | 7.6 | 99 |
| 16 | Effect of the Electrolyte Concentration and Substrate on Conducting Polymer Actuators. Langmuir, 2014, 30, 3894-3904. | 3.5 | 96 |
| 17 | Actuating Textiles: Next Generation of Smart Textiles. Advanced Materials Technologies, 2018, 3, 1700397. | 5.8 | 93 |
| 18 | Polypyrrole micro actuators. Synthetic Metals, 1999, 102, 1309-1310. | 3.9 | 87 |

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|---|---|---|---|
| 19 | Control of Neural Stem Cell Adhesion and Density by an Electronic Polymer Surface Switch. Langmuir, 2008, 24, 14133-14138. | 3.5 | 86 |
| 20 | Active Control of Epithelial Cellâ€Density Gradients Grown Along the Channel of an Organic Electrochemical Transistor. Advanced Materials, 2009, 21, 4379-4382. | 21.0 | 85 |
| 21 | Control of Neural Stem Cell Survival by Electroactive Polymer Substrates. PLoS ONE, 2011, 6, e18624. | 2.5 | 70 |
| 22 | The Cell Clinic: Closable Microvials for Single Cell Studies. Biomedical Microdevices, 2002, 4, 177-187. | 2.8 | 65 |
| 23 | Conjugated-Polymer Micro- and Milliactuators for Biological Applications. MRS Bulletin, 2002, 27, 461-464. | 3.5 | 60 |
| 24 | Biocompatibility of Polypyrrole with Human Primary Osteoblasts and the Effect of Dopants. PLoS ONE, 2015, 10, e0134023. | 2.5 | 58 |
| 25 | Electrochemical Control of Growth Factor Presentation To Steer Neural Stem Cell Differentiation. Angewandte Chemie - International Edition, 2011, 50, 12529-12533. | 13.8 | 56 |
| 26 | Influence of conductive polymer doping on the viability of cardiac progenitor cells. Journal of Materials Chemistry B, 2014, 2, 3860-3867. | 5.8 | 55 |
| 27 | The effect of film thickness on polypyrrole actuation assessed using novel non-contact strain measurements. Smart Materials and Structures, 2013, 22, 104021. | 3.5 | 49 |
| 28 | Fabrication and packaging of integrated chemo-optical sensors. Sensors and Actuators B: Chemical, 1996, 35, 234-240. | 7.8 | 47 |
| 29 | Perpendicular Actuation with Individually Controlled Polymer Microactuators. Advanced Materials, 2001, 13, 76-79. | 21.0 | 45 |
| 30 | Highly Conductive, Photolithographically Patternable Ionogels for Flexible and Stretchable Electrochemical Devices. ACS Applied Materials & Interfaces, 2018, 10, 21601-21611. | 8.0 | 45 |
| 31 | On-chip microelectrodes for electrochemistry with moveable PPy bilayer actuators as working electrodes. Sensors and Actuators B: Chemical, 1999, 56, 73-78. | 7.8 | 44 |
| 32 | A renewable biopolymer cathode with multivalent metal ions for enhanced charge storage. Journal of Materials Chemistry A, 2014, 2, 1974-1979. | 10.3 | 42 |
| 33 | Patterning and electrical interfacing of individually controllable conducting polymer microactuators. Sensors and Actuators B: Chemical, 2013, 183, 283-289. | 7.8 | 41 |
| 34 | Novel actuators based on polypyrrole/carbide-derived carbon hybrid materials. Carbon, 2014, 80, 387-395. | 10.3 | 40 |
| 35 | Type I Collagen-Derived Injectable Conductive Hydrogel Scaffolds as Glucose Sensors. ACS Applied Materials & Interfaces, 2018, 10, 16244-16249. | 8.0 | 40 |
| 36 | Artificial Muscles Powered by Glucose. Advanced Materials, 2019, 31, e1901677. | 21.0 | 39 |

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|---|---|---|---|
| 37 | Propulsion of swimming microrobots inspired by<i>metachronal waves</i>in ciliates: from biology to material specifications. Bioinspiration and Biomimetics, 2013, 8, 046004. | 2.9 | 34 |
| 38 | Redox-active conducting polymers modulate Salmonella biofilm formation by controlling availability of electron acceptors. Npj Biofilms and Microbiomes, 2017, 3, 19. | 6.4 | 31 |
| 39 | 3D Printing Microactuators for Soft Microrobots. Soft Robotics, 2021, 8, 19-27. | 8.0 | 30 |
| 40 | Fast and Highâ€Strain Electrochemically Driven Yarn Actuators in Twisted and Coiled Configurations. Advanced Functional Materials, 2021, 31, 2008959. | 14.9 | 30 |
| 41 | Thin film free-standing PEDOT:PSS/SU8 bilayer microactuators. Journal of Micromechanics and Microengineering, 2013, 23, 117004. | 2.6 | 29 |
| 42 | Artificial Muscles from Hybrid Carbon Nanotubeâ€Polypyrroleâ€Coated Twisted and Coiled Yarns. Macromolecular Materials and Engineering, 2020, 305, 2000421. | 3.6 | 29 |
| 43 | Silicon based affinity biochips viewed with imaging ellipsometry. Measurement Science and Technology, 2000, 11, 801-808. | 2.6 | 28 |
| 44 | Tunable conjugated polymers for bacterial differentiation. Sensors and Actuators B: Chemical, 2016, 222, 839-848. | 7.8 | 28 |
| 45 | Bottom-up microfabrication process for individually controlled conjugated polymer actuators. Sensors and Actuators B: Chemical, 2016, 230, 818-824. | 7.8 | 27 |
| 46 | Investigation of electrically conducting yarns for use in textile actuators. Smart Materials and Structures, 2018, 27, 074004. | 3.5 | 26 |
| 47 | Tailorable, 3D structured and micro-patternable ionogels for flexible and stretchable electrochemical devices. Journal of Materials Chemistry C, 2019, 7, 256-266. | 5.5 | 26 |
| 48 | Novel fabrication of soft microactuators with morphological computing using soft lithography. Microsystems and Nanoengineering, 2019, 5, 44. | 7.0 | 22 |
| 49 | Biohybrid Variableâ€Stiffness Soft Actuators that Selfâ€Create Bone. Advanced Materials, 2022, 34, e2107345. | 21.0 | 22 |
| 50 | Water-processable polypyrrole microparticle modules for direct fabrication of hierarchical structured electrochemical interfaces. Electrochimica Acta, 2016, 190, 495-503. | 5.2 | 21 |
| 51 | Fully 3D printed soft microactuators for soft microrobotics. Smart Materials and Structures, 2020, 29, 085032. | 3.5 | 21 |
| 52 | Electrochemo-dynamical characterization of polypyrrole actuators coated on gold electrodes. Physical Chemistry Chemical Physics, 2016, 18, 827-836. | 2.8 | 20 |
| 53 | The role of ATP signalling in response to mechanical stimulation studied in T24 cells using new microphysiological tools. Journal of Cellular and Molecular Medicine, 2018, 22, 2319-2328. | 3.6 | 17 |
| 54 | Controlling the electro-mechanical performance of polypyrrole through 3- and 3,4-methyl substituted copolymers. RSC Advances, 2015, 5, 84153-84163. | 3.6 | 16 |

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|---|---|---|---|
| 55 | Development of polypyrrole based solid-state on-chip microactuators using photolithography. Smart Materials and Structures, 2018, 27, 074006. | 3.5 | 15 |
| 56 | Patterning Highly Conducting Conjugated Polymer Electrodes for Soft and Flexible Microelectrochemical Devices. ACS Applied Materials & Interfaces, 2018, 10, 14978-14985. | 8.0 | 15 |
| 57 | Tuning the Surface Properties of Polypyrrole Films for Modulating Bacterial Adhesion. Macromolecular Chemistry and Physics, 2016, 217, 1128-1135. | 2.2 | 14 |
| 58 | Electronic control of platelet adhesion using conducting polymer microarrays. Lab on A Chip, 2014, 14, 3043. | 6.0 | 11 |
| 59 | Doping Polypyrrole Films with 4-N-Pentylphenylboronic Acid to Enhance Affinity towards Bacteria and Dopamine. PLoS ONE, 2016, 11, e0166548. | 2.5 | 11 |
| 60 | The effect of electroactive length and intrinsic conductivity on the actuation behaviour of conducting polymer-based yarn actuators for textile muscles. Sensors and Actuators B: Chemical, 2022, 370, 132384. | 7.8 | 11 |
| 61 | Electroresponsive Nanoporous Membranes by Coating Anodized Alumina with Poly(3,4â€ethylenedioxythiophene) and Polypyrrole. Macromolecular Materials and Engineering, 2014, 299, 190-197. | 3.6 | 10 |
| 62 | Soft parallel manipulator fabricated by additive manufacturing. Sensors and Actuators B: Chemical, 2020, 305, 127355. | 7.8 | 10 |
| 63 | Conjugated Polymers as Actuators for Medical Devices and Microsystems. , 2010, , 141-161. | | 9 |
| 64 | An organic electronic ion pump to regulate intracellular signaling at high spatiotemporal resolution. , 2009, , . | | 8 |
| 65 | Altered impedance during pigment aggregation inXenopus laevis melanophores. Medical and Biological Engineering and Computing, 2003, 41, 357-364. | 2.8 | 7 |
| 66 | Electroactive 3D materials for cardiac tissue engineering. Proceedings of SPIE, 2015, , . | 0.8 | 7 |
| 67 | Optimisation of conductive polymer biomaterials for cardiac progenitor cells. RSC Advances, 2016, 6, 62270-62277. | 3.6 | 7 |
| 68 | Switchable presentation of cytokines on electroactive polypyrrole surfaces for hematopoietic stem and progenitor cells. Journal of Materials Chemistry B, 2018, 6, 4665-4675. | 5.8 | 6 |
| 69 | Ionofibers: Ionically Conductive Textile Fibers for Conformal iâ€Textiles. Advanced Materials Technologies, 2022, 7, . | 5.8 | 6 |
| 70 | Electroactive surfaces based on conducting polymers for controlling cell adhesion, signaling, and proliferation. , 2009, , . | | 5 |
| 71 | Electronic Paper: Plasmonic Metasurfaces with Conjugated Polymers for Flexible Electronic Paper in Color (Adv. Mater. 45/2016). Advanced Materials, 2016, 28, 10103-10103. | 21.0 | 5 |
| 72 | Enhancing the Conductivity of the Poly(3,4â€ethylenedioxythiophene)â€Poly(styrenesulfonate) Coating and Its Effect on the Performance of Yarn Actuators. Advanced Intelligent Systems, 2020, 2, 1900184. | 6.1 | 5 |

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|---|---|---|---|
| 73 | Individually controlled conducting polymer tri-layer microactuators. , 2013, , . | | 4 |
| 74 | Soft linear electroactive polymer actuators based on polypyrrole. Proceedings of SPIE, 2015, , . | 0.8 | 4 |
| 75 | Soft actuator materials for textile muscles and wearable bioelectronics. , 2020, , 201-218. | | 4 |
| 76 | Altering the structure of polypyrrole and the influence on electrodynamic performance. , 2011, , . | | 3 |
| 77 | Conducting polymer actuators for medical devices and cell mechanotransduction. , 2013, , . | | 3 |
| 78 | Conducting Polymers as EAPs: Device Configurations. , 2016, , 257-291. | | 3 |
| 79 | Biomedical applications of polypyrrole microactuators: from single-cell clinic to microrobots. , 0, , . | | 2 |
| 80 | Actuators, biomedicine, and cell-biology. Proceedings of SPIE, 2012, , . | 0.8 | 2 |
| 81 | Soft, flexible micromanipulators comprising polypyrrole trilayer microactuators. , 2015, , . | | 2 |
| 82 | Fabrication and adhesion of conjugated polymer trilayer structures for soft, flexible micromanipulators. , 2016, , . | | 2 |
| 83 | A Versatile Flexible Polymer Actuator System for Pumps, Valves, and Injectors Enabling Fully Disposable Active Microfluidics. Advanced Materials Technologies, 2021, 6, 2000769. | 5.8 | 2 |
| 84 | Electromechanically active polymer transducers: research in Europe. Smart Materials and Structures, 2013, 22, 100301. | 3.5 | 1 |
| 85 | Micromechanical stimulation chips for studying mechanotransduction in micturition. , 2015, , . | | 1 |
| 86 | Conducting Polymers as EAPs: Microfabrication. , 2016, , 293-318. | | 1 |
| 87 | Conducting Polymers as EAPs: Characterization Methods and Metrics. , 2016, , 319-351. | | 1 |
| 88 | Conducting Polymers as EAPs: Applications. , 2016, , 385-411. | | 1 |
| 89 | Conducting Polymers as EAPs: Characterization Methods and Metrics. , 2016, , 1-33. | | 0 |
| 90 | Conducting Polymers as EAPs: Applications. , 2016, , 1-27. | | 0 |

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|---|---|---|---|
| 91 | Lab on chip microdevices for cellular mechanotransduction in urothelial cells. , 2016, , . | | 0 |
| 92 | Progress in electromechanically active polymers: selected papers from EuroEAP 2017. Smart Materials and Structures, 2018, 27, 070201. | 3.5 | 0 |
| 93 | Conducting Polymers as EAPs: Microfabrication. , 2016, , 1-26. | | 0 |
| 94 | Conducting Polymers as EAPs: Device Configurations. , 2016, , 1-35. | | 0 |