Curriculum Vitae

Brian T. McVerry, Ph.D.

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PROFILE

- Founder, Scientist, inventor, and entrepreneur with experience bringing together new technology and developing strategic partnerships to grow a successful organization
- National Science Foundation GRFP Recipient and Finalist in the U.S. Patent and Trademark Office National Collegiate Inventor Competition
- Author of several high-profile academic publications and patents

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EMPLOYMENT HISTORY

June 2016 – Present — Chief Scientific Officer, Co-Founder, Silq Technologies — Los Angeles, CA

- Conceived and developed the Silq technology for implanted medical devices from the ground up
- Built partnerships with CMOs to scale both the technology and business from proof-of-concept to revenue generation in 3 years
- Lead investment presentations demonstrating technology, market opportunity, and business strategy
- Generated first revenue by targeting NLUTD patient populations with the greatest complication rates - which is the current sales strategy used by Silq's commercial team
- Leader of regulatory strategy and worked closely with CRO to obtain FDA clearance for urethral (in 1 year), suprapubic, and nephrostomy devices (additional 1.5 years) to reduce patient complications
- Built relationships with physicians, nurses, patients, and KOLs – all now Silq technology champions - and recruited physicians for Silq's scientific advisory board
- Architect of two integral randomized and quasi-experimental clinical studies to demonstrate improved clinical outcomes and patient QoL of devices treated with Silq technology
- Began collaboration with leading the largest long-term and short-term implant OEMs to reduce complication for their devices business engagements ongoing with leading players in cochlear implants, breast implants, contact lenses, gastric balloons, medical grade raw materials manufacturing, and lung biopsy devices
- Lead IP strategy and built patent portfolio with legal team for patents, licensing, and FTO
- Lead reimbursement and claim strategy
- Initiated and secured deals with domestic and international manufacturers that anchor current supply chain

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EDUCATION

Sept 2011 – June 2016 — Chemistry, Ph.D. University of California, Los Angeles — Los Angeles, CA

- Patent: *A Universal Scalable and Cost-Effective Surface Modification for Anti-Fouling Polymeric Membranes* - Licensed to Silq Technologies Corp.
- Patent: *Non-flammable electrolyte for energy storage devices* - Licensed to Nanotech Energy with royalty agreement
- Publication: **McVerry et al.** Bio-inspired zwitterion-treated silicone catheters reduce device-related
- complications in chronically catheterized patients. *Sci. Adv.* 2025. *Under review*.
- Publication: **McVerry *et al.*** A Readily Scalable, Clinically Demonstrated, Antibiofouling Zwitterionic Surface Treatment for Implantable Medical Devices. *Adv. Mater.* 2022, 34, 2200254. Highlighted in ScienceDaily, MSN, World Medicine Foundation, American Association for the Advancement of Science, Healthcare in Europe, NBC Los Angeles. **Impact Factor: 32**
- Publication: **McVerry *et al.*** Next-Generation Asymmetric Membranes Using Thin-Film Liftoff. *Nano Lett.* 2019, 19, 8, 5036–5043. Highlighted on Phys.org. **Impact Factor: 12**
- Authored proposal that awarded National Science Foundation Sustainable Chemistry Grant: Funded $330k for 3 years
- Finalist in the National Collegiate Invention Competition - U.S. Patent Office, Alexandria, Virginia
- Recipient of the National Science Foundation Graduate Research Fellowship: Most prestigious national graduate fellowship program - 16% national acceptance rate with over 12,000 Ph.D. program applicants
- Recipient of National Science Foundation IGERT Fellowship: Clean Energy for Green Industry

- Recipient of Inorganic Faculty Award, UCLA Chemistry and Biochemistry, 2016
- Leader in Sustainability, Anderson School of Management, UCLA
- GPA: 3.6/4.0

Sept 2007 – June 2011 B.S. Biochemistry and Molecular Biology, University of California, Santa Barbara Santa Barbara, CA

- Major GPA: 3.5/4.0
- Dean's Honor Roll: Spring 2009, Fall 2009

SKILLS

- Technology Development and Licensing
- Patent, Manuscript, and Grant Authorship
- Supply Chain Management
- Regulatory Strategy (FDA)
- Go-to Market Strategy
- Medical Device Design
- Computer-aided Design
- Clinical Study Design
- Fundraising
- Microfluidics
- Organic Synthesis
- Polymer Synthesis
- Large Scale Chemical Synthesis
- Nuclear Magnetic Resonance
- Chemical Work Up
- Chemical Characterization
- Tangential Flow Filtration
- Thin-film Membrane Fabrication
- Zeta Potential Analysis
- Goniometry
- Atomic Force Microscopy
- Scanning Electron Microscopy
- Profilometry
- UV-Vis spectroscopy
- Lithium-ion Battery Fabrication and Characterization
- Data Analysis
- Microsoft Powerpoint, Excel, Word
- ChemDraw

PUBLICATIONS AND PATENTS

- Biofouling resistant coatings and methods of making and using the same. US Patent 12,121,634
- Non-flammable electrolyte for energy storage devices. US Patent 12,199,238
- A readily scalable, clinically demonstrated, antibiofouling zwitterionic surface treatment for implantable medical devices. Advanced Materials. 2022. 34, 20, e2200254
- Universal scalable and cost-effective surface modifications. US Patent 11,084,002
- Polyaniline-based chlorine resistant hydrophilic filtration membranes. US Patent 10,532,328
- Energy providing devices and applications thereof. US Patent 11,258,134
- Nanostructured graphene oxide composite membranes with ultrapermeability and mechanical robustness. Nano Letters. 2020. 20, 4, 2209-2218
- Ultrapermeable organic solvent nanofiltration membranes with precisely tailored support layers fabricated using thin-film liftoff. ACS Applied Materials and Interfaces. 2020. 12, 27, 30796-30804
- Asymmetric composite membranes and uses thereof. US Patent App. 16/762,435
- Enhancing polyvalent cation rejection using perfluorophenylazide-grafted-copolymer membrane coatings. ACS Applied Materials & Interfaces. 2020. 12, 37, 42030-42040
- How permeable could a reverse osmosis membrane be if it was specifically developed for uncharged organic solute rejection? AWWA Water Science. 2020. 2, 5, e1189
- Direct grafting of tetraaniline via perfluorophenylazide photochemistry to create antifouling, low bio-adhesion surfaces. Chemical Science. 2019. 10, 16, 4445-4457
- Next-generation asymmetric membranes using thin-film liftoff. Nano Letters. 2019. 19, 8, 5036-5043

- Electrostatically varied grafted copolymers for enhancing multivalent ion rejection for nanofiltration. ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY. 2019. 258
- Separation techniques using conjugated polymers. Conjugated Polymers. 2019. 4th Edition, CRC Press. 629-677
- Integration of Porous Piezoelectric Separator for a Self-Charging Supercapacitor. Electrochemical Society Meeting Abstracts. 2018. 233, 44, 2547
- Roll-to-roll functionalization of polyolefin separators for high-performance lithium-ion batteries. ACS Applied Energy Materials. 2018. 1, 7, 3292-3300
- Surface modification of reverse osmosis membrane by graphene oxide grafting with different oxidation degrees. ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY. 2017. 253
- Low-fouling antibacterial reverse osmosis membranes via surface grafting of graphene oxide. ACS applied materials & interfaces. 2016. 8, 23, 14334-14338
- Flash converted graphene for ultra-high power supercapacitors. Advanced Energy Materials. 2015. 5, 18, 1500786
- Novel chlorine resistant low-fouling ultrafiltration membrane based on a hydrophilic polyaniline derivative. Journal of Materials Chemistry A. 2015. 3, 16, 8725-8733
- Scalable antifouling reverse osmosis membranes utilizing perfluorophenyl azide photochemistry. Macromolecular Rapid Communications. 2014. 35, 17, 1528-1533
- Fabrication of low-fouling ultrafiltration membranes using a hydrophilic, self-doping polyaniline additive. Chemistry of Materials. 2013. 25, 18, 3597-3602
- Synthesis and Characterization of Semicrystalline Polyethylene-graft-Poly (acrylic acid) Copolymers. Macromolecular Chemistry and Physics. 2011. 212, 5, 507-514.