**Revised 04/12/2022** **Biographical sketch**

NAME: Christopher J. Arnusch

PERSONAL STATEMENT: For the past ~10 years, Prof. Arnusch has led successful studies in water treatment technology including polymer membranes, spacers, fouling, and new materials design. He has the facilities to fabricate and test membranes, spacers, including modules. He has developed many types of carbon materials including laser-induced graphene and its derivatives, and has full facilities available for testing and characterization. He has ~60 peer reviewed publications, multiple patents, and H index of 30.

POSITION TITLE & INSTITUTION: Associate Professor, Ben Gurion University

**A. PROFESSIONAL PREPARATION**

| INSTITUTION | LOCATION | MAJOR/AREA OF STUDY | DEGREE | YEAR |
|---|---|---|---|---|
| Weizmann Institute | Rehovot, Israel | Biological Chemistry | postdoc | 2008-2011 |
| Utrecht University | Utrecht, The Netherlands | Chemical Biology and Organic Chemistry | postdoc | 2005-2008 |
| Utrecht University | Utrecht, The Netherlands | Medicinal Chemistry | PhD. | 2005 |
| University of Alberta | Edmonton Alberta, Canada | Organic Chemistry | BSc. | 1999 |

**B. APPOINTMENTS**

| From - To | Position Title, Organization and Location |
|---|---|
| 2020-present | **Associate professor,** Department of Desalination and Water Treatment, Zuckerberg Institute for Water Research, Ben Gurion University of the Negev |
| 2017-2020 | **Senior Lecturer,** Department of Desalination and Water Treatment, Zuckerberg Institute for Water Research, Ben Gurion University of the Negev |
| 2012-2017 | **Lecturer,** Department of Desalination and Water Treatment, Zuckerberg Institute for Water Research, Ben Gurion University of the Negev |

**C. PRODUCTS**

**TOP 5 Products Most Closely Related to the Proposed Project**

1. Pisharody, L.; Thamaraiselvan[PD] C.; Manderfeld, E.; Singh, S. P.; Rosenhahn, A.; **Arnusch[PI], C. J.*** Antimicrobial and Antibiofouling Electrically Conducting Laser-Induced Graphene Spacers in Reverse Osmosis Membrane Modules, *Advanced Materials Interfaces* **2022,** *14*(12), 3179.

2. Manderfeld, E.; Kleinberg, M. N.; Thamaraiselvan[PD] C.; **Arnusch[PI], C. J.*;** Rosenhahn, A*. Thermoregeneration of Fouling-Inhibiting Plastrons on Conductive Laser-Induced Graphene Coatings by Joule Heating. *Advanced Materials Interfaces* **2022,** *14*(12), 3179.

3. Thamaraiselvan C.; Manderfeld, E.; Nunes-Kleinberg, M.; Rosenhahn, A.; **Arnusch, C. J.*** Superhydrophobic Candle Soot as a Low Fouling Stable Coating on Water Treatment Membrane Feed Spacers. *ACS Applied Bio Materials* **2021**, DOI: 10.1021/acsabm.0c01677.

4. Thamaraiselvan, Chidambaram, Jingbo Wang, Dustin K. James, Pradnya Narkhede, Swatantra P. Singh, David Jassby, James M. Tour, and Arnusch C. J. Laser-induced graphene and carbon nanotubes as conductive carbon-based materials in environmental technology. *Materials Today*, **2020**. DOI: 10.1016/j.mattod.2019.08.014

5. Li, Y.; Luong, D.X.; Zhang, J.; Tarkunde, Y. R.; Kittrell, C.; Sargunaraj, F.; Ji, Y.; Arnusch, C. J.*; and Tour, J. M.* Laser-Induced Graphene in Controlled Atmospheres. From Superhydrophilic to Superhydrophobic Surfaces. *Advanced Materials* **2017**, 1700496.

**Other Significant Products**

**Licensed Patents**

6. ANTIBIOFILM AND ANTIMICROBIAL FUNCTIONAL MEMBRANE SPACER
7. METHODS OF FABRICATING LASER-INDUCED GRAPENE AND COMPOSITIONS THEREOF
8. LASER-INDUCED GRAPENE COMPOSITES AND SENSORS AND METHODS OF USE THEREOF

**Relevant previous projects**

**2018-2021** BMBF-MOST water technology grant: Biofouling control in RO/NF desalination with novel laser-induced graphene coated polymeric spacers
Grantee: Arnusch, C. J. (PI) (Total amount *Euro 229,500*).

**D. SYNERGISTIC ACTIVITIES**

1. Cofounder of LIGC Applications Ltd. (Developing antibacterial and antiviral air filters)
2. Consultant
3. Active reviewer for peer reviewed journals