Curriculum Vitae et Studiorum (March 2026)

CHIARA NETO

Professor of Physical Chemistry and Co-Founder of Dewpoint Innovations

School of Chemistry and The University of Sydney Nano Institute,

The University of Sydney, NSW 2600, Australia

1. PERSONAL INFORMATION

Name surname, title	Chiara Neto, Prof
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2. ACADEMIC QUALIFICATIONS

PhD Degree December 2001, University of Florence
Thesis Title: "Atomic Force Microscopy Experiments on Interfaces and Surface Forces" (Supervisors Prof. P. Baglioni and Dr. V. S.J. Craig)

Masters Degree "Laurea" (equivalent to MSc), February 1998, University of Florence
Thesis title: "Applications of Scanning Probe Microscopies to the Study of Adsorption on Solid Surfaces" (Supervisors Prof. P. Baglioni and Dr. G. D. Aloisi)

3. PRESENT AND PREVIOUS APPOINTMENTS

Visiting Fellow – January to June 2026

Institute: Department of Mechanical and Aerospace Engineering, La Sapienza University of Rome
Research group: A/Prof Alberto Giacomello

Professor of Physical Chemistry – from January 2020 to present

Institute: School of Chemistry, The University of Sydney

Co-Founder from August 2022

Start-up Company: Dewpoint Innovations Pty Ltd

Chief Scientific Officer – from August 2022 to August 2024

Start-up Company: Dewpoint Innovations Pty Ltd

Australian Research Council Future Fellow – February 2019 - 2023

Institute: School of Chemistry, The University of Sydney

Domain Leader, Molecular Nanoscience – December 2016 – December 2018

Institute: The University of Sydney Nano Institute, The University of Sydney

Associate Professor – from January 2015 to December 2019

Institute: School of Chemistry, The University of Sydney

Visiting Fellow – April to August 2014

Institute: Department of Physics, University of Cambridge
Research group: Prof Ullrich Steiner

Senior Lecturer – from January 2011 to December 2014

Institute: School of Chemistry, The University of Sydney

Lecturer –April 2007 to December 2010

Institute: School of Chemistry, The University of Sydney

ARC Postdoctoral Fellow - October 2003 to December 2006

Institute: Department of Applied Mathematics, Australian National University
Research Topic: Nanorheology: Hydrodynamic Slip in Newtonian Fluids

Visiting Research Fellow - July 2003 to October 2003

Institute: Department of Chemistry, University of Florence
Research Topic: Assembly of Magnetic Nanoparticles in a Magnetic Field
Research group: Prof. Piero Baglioni

Postdoctoral Fellow - January 2002 to June 2003

Institute: Department of Applied Physics, University of Ulm, and Department of Experimental Physics, Saarland University, Saarbrücken (Germany)
Research Topic: Dewetting of Thin Polymers Films
Research group: Prof. Karin Jacobs

4. RESEARCH AREAS OF INTEREST

- Wetting and spreading of liquids at solid surfaces
- Self-cleaning, stain-resistant, anti-fouling and drag-reducing coatings
- Coatings for atmospheric water capture and passive radiative cooling
- Direct measurement of surface forces
- Interfacial slip of liquids in microfluidic systems
- Studies of nano-structured surfaces and soft matter by atomic force microscopy (AFM)
- Self-assembly at surfaces and interfaces

5. SIGNIFICANT COMPETITIVE GRANTS

- **Neto, C.,** Warr, GG., Davey T., Subramanian P., Cheong, S.F.; ARC Linkage Project LP240200721 “Polymer nanodiscs for advanced paint formulations”, **$742,525** (2025 - 2028)
- **Neto, C**., Song, Q.; “Atmospheric water capture and passive cooling on nanostructured materials”; DAAD Australia-Germany Joint Research Cooperation Scheme, **$25,000** (2026)
- **Neto, C**, Chalker J.; UK Defence and Security Accelerator (DASA) grant “Novel polymer coatings for fluorine-free super-repellent and toxin-deactivating textiles”, **$200,000** (2025-2026)

- **Neto, C**; 2025 Visiting Professor Call by University of Rome La Sapienza
- **Neto, C**.; Australia's Economic Accelerator Ignite Project IG240100628 "Dual function paint coatings: cool-roof and water capture for a sustainable future"; **$499,458** (2025 - 2026)
- **Neto, C**.; Gresham, I., Stenzel, M.; Defence Innovation Network Pilot Project Grant "PDMS-based slippery covalently attached liquid coatings for CBRN protective garments" **$150,000** (2024)
- Gumrah-Parry, A.; **Neto C**.; Royal Society International Exchange "Manipulating Marangoni Flows and Pattern formation in colloidal self-assembly", **$23,000** (2025-2026)
- Defense Advanced Research Projects Agency (DARPA) grant "Microstructured riblets with novel coatings for drag reduction applications" with 5 other research groups (2023)
- **Neto, C**., Golovin, K.; Ignition grant from the University of Sydney "Bioinspired slippery surfaces for atmospheric condensation"; $**50,000** (2024 - 2025)
- **Neto, C**; 2023 Visiting Professor Call by University of Rome La Sapienza
- **Neto, C**., Zhang, X., Giacomello, A.; ARC Discovery Project DP230100555 "Gas-enriched slippery surfaces"; **$432,307** (2023)
- **Neto, C**.; Pacific Channel and other investors contributed over **$1,5M** to incorporate start-up company Dewpoint Innovations (2022), which I led as CSO (2022-2024)
- **Neto, C**., Rasmussen, K.; University of Sydney Major Equipment grant "Facility for the study of large-scale micro- and nanostructured samples"; **$120,000** (2022)
- Zhang, X, **Neto C**.; Natural Sciences and Engineering Research Council of Canada; Alliance International Grant "Nanobubble-enhanced drag and fouling reduction on lubricant infused surfaces: **$25,000** (2022)
- Bilek M. and 14 others; ARC LIEF project LE220100114 "Advanced materials synthesis and environmental characterisation facility", **$1,040M** (2021)
- **Neto, C**.; "Drag-reducing Anti-fouling Coatings for Maritime Applications", Defence Innovation Network PhD Scholarship, **$142,201** (2022)
- Hawkett, B, **Neto C**, Warr G, Davey T, Paravagna O; ARC Linkage Project LP200200806 "Polymer nanofibers for advanced paint formulations", **$472,000** (2020)
- **Neto C**., de Sterke M., Parin R., Chiu M., Straker K.; CDIP fund application, University of Sydney "Advanced Capture of Water from the Atmosphere (ACWA)", **$68,000** (2020)
- Peppou Chapman S., **Neto C.**; Defence Innovation Network Internship, $20,000 (2020)
- Spicer, **Neto** and 10 others; ARC LIEF project LE200100221 "Australian Rheo-Scattering Facilities"; **$320,000** (2020).
- Neto C, Bilinsky H.; Defence Innovation Network Seed Grant; "Anti-fouling properties of riblets", **$100,000** (2019).
- de Sterke, M, **Neto C.**, and six others; Sydney Nano Grand Challenge Project " Advanced Water Capture from the Atmosphere (ACWA)", **$196,000** (2018).
- Ranzi G., **Neto, C**; Faculty of Engineering and IT Major Equipment grant, "Facility for emissivity and fluorescence characterisation of surface materials for buildings and the built environment", **$123,000** (2018)
- Codd, R, **Neto C**., Sintchenko V., Manos, J.; Marie Bashir Institute seed fund "Engineered Virulence Factors with Potential Applications in AMR and Biosurveillance" **$20,000** (2018).
- **Neto, C**; ARC Future Fellowship FT180100214; "Biomimetic surface coatings for drag and fouling reduction", **$858,125** (2018).
- Hawkett, B, **Neto C**, Davey T, Such C; ARC Linkage Project LP170100090 "Polymer micro-capsules for stain-resistant paint", **$661,000** (2017)
- Warr GG and 10 others, ARC LIEF project LE170100148 "An X-Ray Scattering Facility for Bulk and Interfacial Nanostructure", **$300,000** (2017).
- Visiting Fellowship Scheme for Women, Faculty of Science, **$5000** (2016).
- Beam time for work at the ANSTO x-ray reflectometers, with Andrew Nelson: 'Molecular self-assembly of halogen-bonded systems', 2016.
- **Neto C**, Rowlands B; Industry and Community Engagement Scheme, University of Sydney, **$42,000** (2016).
- Palomba S, **Neto C**, Leon-Saval S; "Ultra-Narrow Linewidth Tuneable Laser"; DVC Research/Equipment Grant **$ 22,300** (2016).

- Ling C, Cairney J, Maschmeyer T, **Neto C**, Masters A; "In situ environmental and electrochemistry cell for transmission electron microscopy"; University of Sydney/Equipment Grant, **$133,000**, 2016.
- Beam time for work at the ANSTO neutron and x-ray reflectometers, with Andrew Nelson: 'Effect of toluene vapour pressure on the swelling kinetics of a thin D-polystyrene film', 2016.
- Beam time for work at the ANSTO neutron and x-ray reflectometers, with Andrew Nelson: 'Swelling of dPS films by a mixture of good and bad solvents', 2016.
- Beam time for work at the ANSTO x-ray reflectometer 'Self-assembled monolayers based on halogen bonding', 2015.
- C Ling, and 9 others, "Solid-state ionic conductors with nanoscale architectures: enhanced properties and new possibilities", AINST Accelerator Scheme, **$168,000**, 2015.
- USyd C. Dunstan, A. Jabbarzadeh, **C. Neto**, H. Zreiqat, M. Murray; University of Sydney NHMRC Equipment Grants, "The SurPASS Electrokinetic Surface Potential Analyser for Solid Samples", **$118,690**, 2015.
- Hawkett, **C. Neto**, C. Such; ARC Linkage project "Key Functional Additives in Paint Technology", LP140100285 with Dulux Australia, **$480,000**, 2014.
- R.J. Payne and 19 others; Major Equipment grant "Molecular Weight Characterisation and Quantitation of Biomolecules, Materials and Polymers", **$219,560**, 2014.
- Brown Fellowship of the DVC-Research, the University of Sydney, **$60,000,** 2014.
- **C. Neto**, A.T. Harris, S.C. Thickett, B. Porter; ARC Linkage Project "Micropatterned polymer film coatings for the capture of water directly from the atmosphere", LP130100088 with Nubian Water, **$325,000**, 2013.
- Beam time for work at the ANSTO neutron reflectometer, 2011.
- **C. Neto**; Faculty of Science teaching relief grant, **$8,177***,* 2011.
- **C. Neto**, S. Hendy; ARC Discovery project "Tailoring surface properties to maximise boundary slip for microfluidic applications", DP110101533, **$250,000**, 2011.
- B. S. Hawkett, **C. Neto**, C. H. Such; ARC Linkage project "Janus particles and nanorattles: new materials for paint technology", LP110100109 with Dulux Australia, **$450,000**, 2011.
- **C. Neto**, J. Gamble; ARC Discovery project "New Surfaces for the Control of Endothelial Cell Function: Application in the Design of Biocompatible Stents", DP1094768, **$270,000**, 2010.
- B. S. Hawkett, J. K. Beattie, J. Gore, **C. Neto**, ARC Linkage project "Inhibition of Spontaneous Detonations of Explosive Emulsions in Hot and Reactive Grounds", LP100100720 with Dyno Nobel, **$420,000**, 2010.
- Beam time for work at the ANSTO neutron reflectometer 'Block copolymer thin films for use in bio-sensing and medical applications', 2010
- Beam time for work at the ANSTO neutron reflectometer 'Studies of cross-linking and dewetting in multilayer polymer thin films using neutron reflectometry', 2009
- Beam time for work at the ANSTO neutron reflectometer 'Structural characterisation of thermally modified poly(N-vinyl pyrrolidone (PNVP) polymer films', 2009.
- P. Thordarson, **C. Neto**, and 18 others; ARC LIEF project "A unique soft matter high-performance scanning probe microscopy facility", **$450,000**, 2010.
- A. Harris, **C. Neto**; Seeding Grant from the University of Sydney Institute for Sustainable Solutions on "Sustainable water for Australian cities." **$104,590**, 2009.
- G. R. Willmott, **C. Neto** ISAT Linkages Fund (New Zealand), "Experimental Micro- and Nanofluidics: Hydrophobic Spheres and Capillaries", **$2580**, 2009.
- **C. Neto** et al.; "A State-of-the-Art Soft Matter Atomic Force Microscope", Major Equipment grant, The University of Sydney, **$180,000**, 2009.
- **C. Neto** et al.; "Equipment for the Fabrication of Colloid Probes", Minor Equipment Grant, University of Sydney, **$18,488**, 2008.
- Niche Manufacturing Flagship Scholarship for one PhD student, **$36,000**, 2008-2011.
- **C. Neto** et al.; "A Facility for the Characterisation of Surface Properties of Solids and Liquids", Major Equipment Grant, University of Sydney, **$115,000**, 2007.
- V.S. Craig; E.J. Wanless; G.V. Franks; **C. Neto**; M.M. Kohonen; G.J. Jameson; Dynamics at Interfaces: a facility for the characterisation of the dynamics of structural reorganisation and

adsorption at interfaces: ARC, Linkage Infrastructure Equipment and Facilities, **$187,000**, 2005.

- V.S. Craig; E.J. Wanless; G.V. Franks; **C. Neto**; M.M. Kohonen; G.J. Jameson; A facility for the investigation of dynamic processes at interfaces: Australian National University, Major Equipment Expenditure, **$89,000**, 2005.
- S.R. Biggs, V.S. Craig; **C. Neto**; ARC, Discovery Project and APD Fellowship, "Nanorheology: Hydrodynamic Slip in Newtonian Fluids", **$291,000**, 2003.

6. PUBLICATION LIST

Book Chapters

1. H.T.T. Duong, D. Nguyen, **C. Neto***, B. S. Hawkett; Chapter 2 "Synthesis and applications of polymeric Janus nanoparticles", in "*Soft, Hard, and Hybrid Janus Structures: Synthesis, Self-Assembly, and Applications*", (pp. 31-68), edited by Zhiqun Lin and Bo Li, World Scientific (2018). (**CIT** = 2)
2. Ambrosi, M, Dei, L, Giorgi, R, **Neto, C**, Baglioni, P, Koutsoukos, P 2001, 'Stable dispersions of $Ca(OH)_2$ in aliphatic alcohols: properties and application in cultural heritage conservation', *Trends in Colloid and Interface Science* XV, vol. 118, pp. 68-72 (**CIT** = 26)
3. **Neto, C**, Berti, D, Aloisi, G, Baglioni, P, Larsson, K, Buckin, V 2000, 'In situ study of soft matter with atomic force microscopy and light scattering', *Trends in Colloid and Interface Science* XIV, vol. 115, pp. 295-299 (**CIT** = 4)
4. **Neto, C**, Berti, D, Aloisi, GD, Baglioni, P & Larsson, K 2000, 'In situ study of soft matter with atomic force microscopy and light scattering', *Progress in Colloid and Polymer Science*, vol. 115, pp. 295-299. (**CIT** = 2)

Journal articles published (citations updated December 2024):

The asterisk * indicates publications in which Neto is the corresponding author. Impact factor (**IF**) is indicated, together with number of citations (**CIT**) for papers published before 2023.

1. P. Dogra, B. Sanogo, I.J. Gresham, C. Neto, R.P. Bharti, X. Zhang; "Surface Microbubbles Attenuate Gas-evolution Reaction at Soft Interfaces", *ACS Appl. Mater. Interfaces* accepted 24/03/2026 (**IF** =9.5)
2. L. James, I. J. Gresham, G. Schnell, H. Seitz, **C. Neto***; "Effect of Surface-Lubricant Compatibility on Bubble Formation in Lubricant-Infused Surfaces'; *Adv. Mater. Interfaces* accepted 14/02/2026 (**IF** = 6.389)
3. M. Chiu, E. Theau, A. Harrison, J. Terpstra, R. Parin, C. M. d. Sterke, T. J. Alexander, **C. Neto***; "Passively Cooled Paint-Like Coatings for Atmospheric Water Capture" *Adv. Funct. Mater.* 2025, https://doi.org/10.1002/adfm.202519108 (**IF** = 19.0).
4. I.J. Gresham, H. Barrio-Zhang, J.H. Cho, B. Khatir, G.G. Wells, K. Golovin, G. McHale, **C. Neto***; "Comparing methods for preparing slippery liquid-like polydimethylsiloxane coatings*"* (2025) *Nature Protoc.*, https://doi.org/10.1038/s41596-025-01253-6 (**IF** = 16)
5. R. Hu, G. McHale, H. Barrio-Zhang, **C. Neto** and G. G. Well; "Understanding Contact Angle Hysteresis: The Case of Slippery Micro-Patterned Biphilic Liquid-Like Surfaces" *Langmuir* 41, 28579-28591, 2025 (**IF** = 4.33)
6. S. W. Chong, J. Sardharwalla, G. S. P. Masonsong, J. Cosgrove, A. Katselas, I. J. Gresham, M. Bilek, Y. Shen, **C. Neto**, D. Vigolo; "A Modular Microfluidic System to Generate Gradient Hydrogels With Simple-to-Complex Stiffness Profiles for Mechanobiology" *Adv. Mater. Technol. 10,* e01457 2025 (**IF** = 6.2)

7. T. Wen, I. J. Gresham, R. Aguiar, P. Lee, **C. Neto**, K. Golovin; "Substrate engineering for durable omniphobic liquid-like surfaces", *Adv. Funct. Mater.* 2505108 DOI: 10.1002/adfm.202505108 (2025) (**IF** = 19)
8. J. H. Cho, I. J. Gresham, A. Katselas, Glen McHale, and **C. Neto***; "Design of Mixed PDMS-mPEG Slippery Covalently Attached Liquid-like Surfaces", *ACS App. Mater Interfaces*, 17, 30316−30326 (2025) (**IF** = 8.5) **Open access** https://hdl.handle.net/2123/34983
9. L. James, C. Vega-Sánchez, P. Mehta, X. Zhang, **C. Neto***; "Experimental Study of Gas Microbubbles on Oil-Infused Wrinkled Surfaces", *Adv. Mater. Interfaces*, 17, 30316-30326 (2025) (**IF** = 6.389) **Open access** https://hdl.handle.net/2123/34980
10. A. Naga, L. Scarratt, **C. Neto**, P. Papadopoulos, D. Vollmer; "Drop Friction and Failure on Superhydrophobic and Slippery Surfaces", *ACS Nano*, 10.1021/acsnano.5c01142 (2025). (**IF** = 15.8)
11. **C. Neto,** Editorial "*Pioneers in Applied and Fundamental Interfacial Chemistry (PAFIC): Janet A. W. Elliott*", Langmuir 41, 7923–7925, (2025) 10.1021/acs.langmuir.5c01092 (**IF** = 4.33)
12. B. Sanogo, P. Dogra, K. Kalita, **C. Neto**, X. Zhang; "Interfacial Hydrogen Evolution Reaction from Ouzo-Effect-Generated Bulk Nano/Micro Droplets of Liquid Organic Hydrogen Carriers" *J. Colloid Interface Sci.* 691, 137346 (2025) (**IF** = 9.7) **Journal open access**
13. F. Rasera, I. J. Gresham, A. Tinti, **C. Neto***, A. Giacomello; "Molecular origin of slippery behavior in tethered liquid layers" *ACS Nano* 19, 8020-8029 (2025) https://doi.org/10.1021/acsnano.4c15843 (**IF** = 15.8) **Open access** https://hdl.handle.net/2123/34979
14. G. Turpin, D. Nguyen, K. Sypkes, C. Vega-Sanchez, T. Davey, B.S. Hawkett, **C. Neto***; "Encapsulation of oil droplets using film-forming Janus nanoparticles" *Langmuir* 41, 3166–3176 (2025) https://doi.org/10.1021/acs.langmuir.4c03843 (**IF** = 4.33) **Open access** https://hdl.handle.net/2123/34723
15. C. Vega-Sanchez, **C. Neto***; "Fluid slip and drag reduction on liquid-infused surfaces under high static pressure" *Langmuir* 40, 4460-4467 (2024) doi:10.1021/acs.langmuir.3c03792 (**IF** = 4.33) **Open access** https://hdl.handle.net/2123/33731
16. G. Turpin, D. Nguyen, P. Subramanian, T. Davey, S. F. Cheong, Greg Warr, **C. Neto***, Brian Hawkett "Tensile benefits of nanofibers in commercial paint" *Polym. Chem*. (2024) 10.1039/d3py01335a. (**IF** = 4.760) **Open access** https://hdl.handle.net/2123/33733
17. J.K. Hong, I. J. Gresham, D. Daniel, A. Waterhouse, **C. Neto***; "Visualizing Nanoscale Lubricant Layer Under Blood Flow" *ACS Appl. Mater. Interfaces* 15, 56433–56441 (2023) https://doi.org/10.1021/acsami.3c11898 (**IF** =9.5) **Open access**
18. D. Stuart-Fox, L. Ng, L. Barner, A.T.D. Bennet, S. J Blamires, M. A. Elgar, A. R. Evans, A. Franklin, K. Hölttä-Otto, J. A Hutchison, F. Jativa, A. Jessop, J. Kelley, J. McGaw, J. Mei, M. Mirkhalaf, M. Musameh, **C. Neto**, A. J. O'Connor, T. Schork, G. E Schröder-Turk, N. H Voelcker, A. Wang, G. S Watson, J. A Watson, L. Wesemann, W. WH Wong; "Challenges and opportunities for innovation in bioinformed sustainable materials"; *Commun. Mater*. 4, 80 (2023) https://rdcu.be/dnJI9 (**IF** = 7.8, **CIT** = 3) **Journal open access**
19. I. J. Gresham, S. G. Lilley, A. R.J. Nelson, K. Koynov, **C.Neto***; "Nanostructure Explains the Behavior of Slippery Covalently Attached Liquid Surfaces" *Angew. Chemie* e202308008 (2023) https://doi.org/10.1002/anie.202308008 (**IF** = 16.6, **CIT** = 18) **Journal open access**
20. G. McHale, R. Ledesma-Aguilara, **C. Neto**; "Cassie's Law Reformulated: Composite Surfaces From Superspreading to Superhydrophobic" *Langmuir* **39**, 11028-11035 (2023) doi:10.1021/acs.langmuir.3c01313 (**IF** = 4.33, **CIT** = 3) **Journal open access**
21. A. Katselas, I.J. Gresham, A. Nelson, **C. Neto***; "Exploring Water Capture Efficiency on Hydrophilic and Hydrophobic Covalently-Attached Liquid Surfaces" *J. Chem. Phys. 158, 214708* (2023) doi: 10.1021/acs.langmuir.3c01313 (**IF** = 4.4, **CIT** = 2) **Journal open access**
22. I.J. Gresham, **C. Neto***; "Advances and challenges in slippery covalently-attached liquid surfaces" *Adv. Colloid Interface Sci.* 315, 102906, doi:10.1016/j.cis.2023.102906 (2023). (**IF** = 15.19, **CIT** = 30) **Open access**
23. J.K. Hong, A.M. Ruhoff, K. Mathur, **C. Neto**, A. Waterhouse; "Mechanisms for Reduced Fibrin Clot Formation on Liquid-Infused Surfaces" *Adv. Healthcare Mater.* 11, 2201360 (2022)

https://doi.org/10.1002/adhm.202201360 **Journal open access** (**IF** = 9.933, **CIT** = 7) **with front cover**

24. C. Vega-Sánchez**, C. Neto***; "Slightly Depleted Lubricant-infused Surfaces Are No Longer Slippery", *Langmuir* (2022) 38 10568–10574 https://doi.org/10.1021/acs.langmuir.2c01412 (**IF** = 4.33, **CIT** = 10) https://hdl.handle.net/2123/31693 **open access**
25. S. Peppou-Chapman, C. Vega-Sanchez, **C. Neto***; "Detection of Nanobubbles on Lubricant-Infused Surfaces Using AFM Meniscus Force Measurements", *Langmuir* 38, 10234-10243 10.1021/acs.langmuir.2c01411 (2022). https://hdl.handle.net/2123/31696 **open access** (**IF** = 4.33, **CIT** = 4)
26. A. Katselas, R. Parin, **C. Neto***; "Quantification of Nucleation Site Density as a Function of Surface Wettability on Smooth Surfaces" *Adv. Mater. Interfaces* 9, 2200246 **(2022)** https://doi.org/10.1002/admi.202200246 (**IF** = 6.14, **CIT** = 16) **Journal open access**
27. C. Vega-Sánchez, S. Peppou-Chapman, L. Zhu, **C. Neto*;** "Nanobubbles explain the large slip observed on lubricant-infused surfaces", *Nature Comm.* 13, 351,(2022) https://doi.org/10.1038/s41467-022-28016-1 **Highlighted by the Editor, 26 Jan 2022 Journal open access .(IF** = 14.92, **CIT** = 44)
28. J.K. Hong, K. Mathur, A. M. Ruhoff, B. Akhavan, A. Waterhouse, **C. Neto***; "Design Optimization of Perfluorinated Liquid-Infused Surfaces for Blood-Contacting Applications", *Adv. Mater. Interf.* 9(10) 2102214 (2022). **Open access** (**IF** = 6.14, **CIT** = 14)
29. C. Vega-Sánchez, C. Neto; "Pressure drop measurements in microfluidic devices: a review on the accurate quantification of interfacial slip", *Adv Mater. Interf.* 9, 2101641 (2022). **Open access** (**IF** = 6.14, **CIT** = 11) **with cover**
30. S. Baeckens, M. Temmerman, S. N. Gorb, **C. Neto**, M. J. Whiting, R. Van Damm, "Convergent evolution of skin surface microarchitecture and increased skin hydrophobicity in semi-aquatic anole lizards", *J. Exp. Biol*. 224, doi:10.1242/jeb.242939 (2021). **Open access** (**IF** = 3.312, **CIT** = 5)
31. S. Peppou-Chapman, **C. Neto***; "Depletion of lubricant from lubricant-infused surfaces due to the air/water interface", Langmuir 37, 3025-3037 (2021) **with front cover** (**IF** = 3.683, **CIT** = 28)
32. R. A. Fenati, M. S. Quinn, H. Bilinsky, **C. Neto***; "Antifouling Properties of Liquid-Infused Riblets Fabricated by Direct Contactless Microfabrication", *Adv. Eng. Mater.* 23, 2000905 (2021) (**IF** = 2.319, **CIT** = 5)
33. Z. Wang, A. Owais, **C. Neto**, J.-M. Pereira, Y. Gan, "Enhancing Spontaneous Droplet Motion on Structured Surfaces with Tailored Wedge Design", *Adv. Mater. Inter.* 8, 2000520 (2021) (**IF** = 4.27, **CIT** = 12) **with back cover**
34. A. M. Djerdjev, P. Priyananda, J. Gore, J. K. Beattie, **C. Neto**, B. S. Hawkett; "Safer Emulsion Explosives Resulting from NOx Inhibition"; *Chem. Eng. J.* 403, 125713 (2021) (**IF** = 8.355, **CIT** = 2)
35. J. K. Hong, L. Gao, J. Singh, T. Goh, A. M. Ruhoff, **C. Neto** and A. Waterhouse, "Evaluating medical device and material thrombosis under flow: current and emerging technologies" *Biomat. Sci.* 8, 5824-5845 (2020). DOI https://doi.org/10.1039/D0BM01284J (**IF** = 6.183, **CIT** = 37)
36. D. Nguyen, L. Zhu, V. T. Huynh, A. Azniwati, N. T. H. Pham, M. T. Lam, A. K. Serelis, T. Davey, C. Such, **C. Neto**, B. S. Hawkett; "Soft-Hard Janus Nanoparticles for Polymer Encapsulation of Solid Particulate", *Polym. Chem*. 11, 5610-5618 (2020) https://hdl.handle.net/2123/27842 (**IF** = 4.760, **CIT** = 7)
37. L.R. Scarratt, L. Zhu, **C. Neto***; "Large effective slip on lubricated surfaces measured with colloidal probe AFM", *Langmuir* 36, 6033–6040 (2020) (**IF** = 3.683; **CIT** = 18)
38. S. Peppou-Chapman, J. K. Hong, A. Waterhouse, **C. Neto***; "Life and death of liquid-infused surfaces: a review on the choice, analysis and fate of the infused liquid layer", *Chem. Soc. Rev.* 49, 3688-3715 (2020) (**IF** = 40.443, **CIT** = 240, Web of Science highly cited article)
39. A. Abate, R. Dehmel, A. Sepe, N. L. Nguyen, B. Roose, N. Marzari, J. K. Hong, J. Hook, U. Steiner, **C. Neto***; "Halogen-Bond Driven Self-Assembly of Perfluorocarbon Monolayers on Silicon Nitride" *J. Mater. Chem. A* 7, (42), 24445-24453 (2019) (**IF** = 10.733; **CIT** = 13)

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Case study in a book

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Patents

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3. C. Neto, C. M. de Sterke, M. Chiu, "A composite coating for increasing atmospheric condensation on a surface of a substrate" PCT/AU2021/050221 https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2021179052, **2021**
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7. CITATION RECORD

- Globally the papers of which I am co-author have been cited by **over 7000 times** (Google Scholar) as of today. **My h-index is 33** (ISI Web of Science; **39** on Google Scholar).
- The number of citations received by the review in *Chem. Soc. Rev.* (49, 3688-3715 (**2020**)) places our work in the top 1% of the academic field of Chemistry (Web of Science).
- Our article in Advanced Functional Materials on radiative cooling coatings was featured on Guardian Australia on 31st October 2025, and on an interview on ABC Radio Sydney.
- Our article on Angewandte Chemie on slippery covalently-attached liquid surfaces in August **2023** has led to international collaborations with Uni. Edinburgh, Max Planck Institute for Polymer Research, and Uni. Toronto, and was highlighted in media releases on Australian Manufacturing and by ANSTO.

- I regularly present my start-up commercialisation journey to University and external audiences, as in the 'From Lab to Market' University showcase event in August 2023, and at commercialisation workshops, such as this in October 2023 https://www.youtube.com/watch?v=5qflfokrtCc (at minute 28)

- My research was features in Cosmos Magazine with an article "On the surface" in June 2022
- Our *Nature Communications* article entitled "Nanobubbles explain the large slip observed on lubricant-infused surfaces" was highlighted by the Editor under "Materials science and chemistry"(26 Jan 2022), and featured in a number of media releases, such as in Phys.org "Nanobubbles provide pathway to build better medical devices".
- Our research on the Grand Challenge project 'Advanced Capture of Water from the Atmosphere' was featured on the ABC Episode 4 of "The Great Acceleration" – Food, Water, Waste, in August 2020. https://iview.abc.net.au/show/great-acceleration/series/1/video/DO1845H004S00 (ACWA features at minute 35).
- Our award-winning research on "Advanced Capture of Water from the Atmosphere' was highlighted in a Sydney Ideas public lecture in November 2021 https://www.sydney.edu.au/engage/events-sponsorships/sydney-ideas/2021/sydney-nano-grand-challenges.html (minute 36:56, attended online by over 450 people) and the show was aired on the ABC Science Show https://www.abc.net.au/radionational/programs/bigideas/big-solutions-on-the-nano-scale/13659508 (ACWA features at minute 21).
- The ACWA project was selected to participate in the University's Incubate Accelerator in 2021 https://www.youtube.com/watch?v=NixHDD1uuK0 (our 4-minute pitch at 58:10)
- Our ACWA research was featured in National Science Week 2020 as part of "Live from the Lab", and, inspired by the research, the Sydney songwriter Nardean composed the song "Nanosteps" https://www.youtube.com/watch?v=UFQak41su0Q
- Our research on surfaces for atmospheric water capture was featured on The Australian (October 17th, 2018).
- Our research on slippery anti-fouling surface coatings mimicking the pitcher plant was highlighted in numerous media websites, including EurekAlert! of the Australian Academy of

Science (http://bit.ly/2DnGRUn), phys.org (http://bit.ly/2DgsTAm) and elsewhere (http://bit.ly/2FJUlbs; http://bit.ly/2B80xX2) in January 2018.

- Our research on Teflon wrinkles was highlighted in Chemical & Engineering News (C&EN), a weekly magazine published by the American Chemical Society (2016). http://cen.acs.org/articles/94/web/2016/03/simple-method-yields-wrinkly-water.html
- Our research on adhesive superhydrophobic surfaces formed by raspberry particles was highlighted in an article on ABC Science Online in September 2013 http://www.abc.net.au/science/articles/2013/09/18/3851548.htm?site=science/tricks&topic=latest.
- Our research on superhydrophobic and biomimetic surfaces for water capture was highlighted in an interview on the ABC science program ***Catalyst*** in June 2011 http://www.abc.net.au/catalyst/stories/3257884.htm. The research was also featured on SBS World News Australia, SBS Italian Radio (in 2011 and 2013), and ABC Radio Australia.
- Our work on superhydrophobic surfaces was highlighted twice in the general media - ABC Science Online - first in 2009 ("Nano-nickel makes cheap self-cleaning surface"), and then in 2013 ("Rose petals inspire nano-raspberry surfaces").
- Our work on water capture devices was highlighted in the general media: see ECOS Magazine, vol. Feb-Mar 2010:http://ecosmagazine.com/?act=view_file&file_id=EC153p22.pdf, Australasian Science Magazine, May 2010 http://www.control.com.au/bi2010/bi314.php, and UNI NEWS, 13 May 2010, http://www.usyd.edu.au/news/84.html?newsstoryid=4918.
- My paper on "Biomimetic Surface Coatings for Atmospheric Water Capture Prepared by Dewetting of Polymer Films" Adv. Mater (2011) has been cited **191 times** and started the program of research that led to the incorporation of Dewpoint Innovations Pty Ltd (2022) .
- One of the papers of which I am coauthor (*Phys. Rev. Lett.* 87, 54504-54507 (2001)) has received (Oct 2021, ISI Web of Science) **257 citations** and is one of the seminal investigations in the currently expanding field of interfacial slippage of Newtonian liquids. This paper has been highlighted in the general media, see: News in Science of ABC Science Online, 1st August 2001 at http://www.abc.net.au/science/news/; Physics Update of Physics Today, vol. 54, No. 9, Sept. 2001; AIP Physics News Update, No. 547, 12th July 2001.
- A review on liquid slip measurements published on *Reports on Progress in Physics* was well-received and has been cited **986 times** since its publication in 2005. This paper is in the top 1% of the academic field of Physics based on a highly cited threshold for the field and publication year (ISI web of Science).

8. AWARDS AND EVIDENCE OF RECOGNITION

- **2022:** Selected as member of the Editorial Advisory Board of Langmuir and the Journal of Colloid and Interface Science
- **2022:** Elected member of the Council of IACIS (International Association of Colloid and Interface Scientists)
- **2022**: Invited to present to the Australian Academy of Science event "Surprising Science: carnivorous plants" – (https://www.youtube.com/watch?v=IVvRRRhqxJQ at minute 30:18)
- **2021**: Elected Fellow of the Royal Society of NSW
- **2020**: Member of the Editorial Board of Advanced Materials Interfaces
- **2020: Neto C**., de Sterke M., Chiu M., Straker K; Winner of the Bridge Hub Water Challenge, Australian Research Stream (https://www.youtube.com/watch?v=rrecEVwyZLc from around 32:00) **$25,000**.
- **2018:** Awarded an ARC Future Fellowship, $860,000 (2019 -2022).

- **2018:** Awarded a University of Sydney Research Accelerator Fellowship (SOAR), $50,000 per year (2018 -2019).
- **2015 - 2018:** President of the Australasian Colloid and Interface Society (ACIS)
- **2014:** Brown Fellowship of the DVC-Research, the University of Sydney, $60,000
- **2012 - 2018:** Founding Director of the Australasian Colloid and Interface Society

9. TEACHING EXPERIENCE

The teaching duties undertaken while at the University of Sydney are summarised below:

- **2024 – present: 'Concept in Chemical Physics/Concepts in Chemistry of Biological Molecules,' CHEM253X:** 2nd year unit, 13 lectures
- **2021 - present: 'Molecular Self-Assembly, CHEM3X22':** 3rd Year Unit, 6 lectures;
- **2022 - 2018: 'Third Year Advanced Seminar Series':** 3rd Year Unit, 6 lectures, 'The Nano World Around Us'
- **2019:** Postgraduate course on "Surface Science and Capillarity", University of Florence
- **2012 - 2020: 'Membranes, Self-assembly & Surfaces, CHEM3X16':** 3rd Year Unit, 45 contact hours: 8 lectures, 1 tutorial and 9 x 4-hour labs; approx. 25 students; course coordinator
- **2016 - 2017: Advanced Chemistry, CHEM1901:** 1st Year Unit, 28 contact hours: 19 lectures, 7 tutorials; 250 students

10. SERVICE

Service at the University of Sydney
- Chair of the theme Self-Assembled Nanomaterials within the School of Chemistry and members of the Research Committee (2021 - 2025)
- Chair of the Sydney chapter of the Australasian Colloid and Interface Science Conference, University of Sydney (February 2021)
- Member of the Local Promotions Committee from level B to level C, Faculty of Health and Medicine (2020)
- Member of the School of Chemistry Leadership Committee (2019)
- Member of the School of Chemistry Equity, Diversity and Inclusion Committee (2019-2020)
- Member of the Governance and Leadership Workload Committee (2019)
- Leader of the Domain Molecular Nanoscience within The University of Sydney of Sydney Nano Institute (2016 -2018)
- Chair of the Local Promotions Committee from level A to level B, Faculty of Science (2016-2018)
- Postgraduate Coordinator (2015-2016), and Deputy Postgraduate Coordinator (2012, 2014), School of Chemistry
- Member for the Faculty of Science of the Postgraduate Awards Sub-Committee (2014-2015)
- Third Year Physical Chemistry Lab Director (2009 – 2012), School of Chemistry

Service to the Discipline and Community
- Member of the Scientific Committee of the Droplets2025 conference, Liege (July 2025)
- Member of the Scientific Committee of the Third International Conference on Nature-Inspired Surface Engineering (NISE 2024), Granada (November 2024)
- Member of the Scientific Committee of the Droplets2025 conference, Liege (July 2025)
- Member of the Organising Committee of the Australasian Colloid and Interface Science Conference, ACIS2024, Terrigal (Feb 2024)
- Member of the Local Organising Committee, Conference of the International Association of Colloid and Interface Scientists, Brisbane (June 2022)

- Member of the program selection committee of the Australian Colloids and Interface symposium, Coffs Harbour (2017) and Noosa (2013)
- Chair of the 30th Australian Colloid and Surface Science Student Conference, Kioloa NSW (February 2016)
- Director of the Board of the Australasian Colloid and Interface Society (2012-2018), and President (2015- 2018)
- Originator of the Nano Lens
- Referee for Australian Research Council Discovery, DECRA and Linkage projects
- Referee for the European Research Council Fellowship Scheme, Israel Science Foundation, Marsden Fund (Royal Society of New Zealand), French National Research Agency (ANR), Research Council of Canada, and Australia-India Strategic Fund (Australian Research Council Nanotechnology Network)
- Examiner of PhD Theses
- Reviewer for several international scientific journals such as Langmuir, J. Phys. Chem., Eur. Phys. J. E, J. Mater. Chem., PCCP, Lab on a Chip, Phys. Rev. Lett., Soft Matter, and Physica A
- Member of the Royal Australian Chemical Society, Australasian Colloid and Interface Society, Australian Research Network for Advanced Materials and the Australian Research Council Nanotechnology Network.

11. INVITED TALKS since 2015

- **2024**: Invited to present six lectures at the **FLOW Winter School on Fluids and Interfaces**, Stockholm
- **2024**: Plenary talk at the **South Australian RACI** Physical, Polymer and Materials Chemistry Symposium, Adelaide
- **2023:** Keynote talk at **UK Colloids 2023,** Liverpool
- **2023:** Plenary talk **International Conference on Colloids,** Palma de Mallorca
- **2022:** Keynote lecture at the Conference **Nature-Inspired Surface Engineering**, Seoul
- **2022:** Invited talk at the Workshop on Bioinspired Advanced Materials, Melbourne.
- **2022:** Keynote lecture at the Symposium "Droplet and flow interactions with bio-inspired and smart surfaces" of the Special Interest Group of the **UK Fluids Network,** online
- **2022:** Invited talk at the School of Environmental and Life Sciences, University of Newcastle, online
- **2022: Australian Academy of Science** Public Speaker Series "Surprising Science: borrowed ideas leading to unimagined consequences"
- **2021:** Plenary lecture at **Droplets 2021** Conference, online
- **2021:** Invited talk at the Laboratory for Advanced Modelling and Simulation in Engineering and Science, QUT, online
- **2021:** Keynote lecture at **UK Colloids 2021** Conference, online.
- **2020:** Invited talk (webinar), International Polymer Colloids Group
- **2020:** Invited talk at the Gordon Research Conference "Colloidal, Macromolecular and Polyelectrolyte Solutions", Ventura, California.
- **2019:** Invited seminars at the Max Planck Institute for Polymer Research, Nano and Micro-Fluidics TU Darmstadt, Imperial College, Politecnico di Milano, University of Rome La Sapienza
- **2019:** Keynote talk at the Australian Coatings Show (Melbourne)
- **2019:** Invited talk at the Australian and New Zealand Microfluidic and Nanofluidic Symposium (Wollongong)
- **2019:** Invited seminar at the ithree Institute, University of Technology Sydney
- **2019:** Invited talk, Heraeus Seminar "Wetting on Soft or Microstructured Surfaces", Physikzentrum Bad Honnef (Germany).
- **2018:** Invited seminar, Intelligent Polymer Research Institute, University of Wollongong
- **2018:** Invited seminar, Centre for Excellence in Advanced Food Enginomics, University of Sydney
- **2018:** Invited talk, International Conference on Emerging Advanced Nanomaterials, Newcastle

- **2018:** Invited talk, 9th Vacuum and Surface Science Conference of Asia and Australia, Sydney
- **2018:** Invited seminar at the School of Chemistry and Biomolecular Science, University of Queensland
- **2018:** Invited seminar at the Karlsruhe Institute of Technology
- **2017:** Invited Keynote, 9th Australian-Korean Rheology Conference, Sydney
- **2017:** Invited talk at the Flinders Center for Nanoscale Science and Technology, Adelaide
- **2017:** Invited Keynote, European Student Colloid Conference, Florence
- **2017:** Australian Society of Rheology 2017 Rheology Lecture Series, University of Sydney
- **2017:** School seminar at the Research School of Chemistry, Australian National University
- **2016:** Invited Keynote at the 67th Divisional Meeting on Colloid and Interface Chemistry International Symposium, Asahikawa, Japan
- **2016:** Invited seminars at the Adolphe Merkle Institute University of Fribourg, Max Planck Institute for Polymer Research Mainz, Imperial College London, and University of Florence.
- **2015:** Invited Keynote at the MRS Fall Meeting, Boston, USA
- **2015:** Invited Keynote at Pacifichem, Honolulu
- **2015:** Invited Keynote at the NSW Polymer Symposium, UNSW, Sydney
- **2015:** Invited Keynote talk at the 15th Conference of the International Association of Colloid and Interface Scientists, Mainz