

# Dr Benjamin A. D. Williamson

## MSci MPhil PhD



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### 🔧 Employment

#### **Norwegian University of Science and Technology (NTNU) (2019 – Present)**

Trondheim, Norway

Researcher in Computational Materials Design

*Themes: Battery materials, ferroelectrics/multiferroics, solar cells, novel inorganic/organic functional materials*

Functional Materials and Materials Chemistry Research Group (FACET)

Advisors: Prof. Tor Grande & Prof. Sverre M. Selbach

#### **University College London (2018 – 2019)**

London, United Kingdom

Research Associate in Computational Materials Design

Scanlon Materials Theory Group

Advisor: Prof. David O. Scanlon

### 🎓 University Education

#### **University College London (2014 – 2018)**

London, United Kingdom

MPhil/PhD in Computational Inorganic Materials Chemistry – *no corrections*

Thesis title : *Understanding the Electronic and Thermodynamic Properties of Wide Band Gap Materials*

Supervisor: Prof. David O. Scanlon; Secondary Supervisor: Prof. Claire J. Carmalt

#### **University College London (2010 – 2014)**

London, United Kingdom

MSci in Chemistry – 1<sup>st</sup> Class Honours

MSci dissertation title: *Computational Design of Next-Generation p-Type Semiconductors*

Supervisor: Prof. David O. Scanlon

### 💰 Funding Grants

#### **Tuneable Earth Abundant and Solid-State Electrolytes for Li-ion Batteries (TEASE)**

Research Council of Norway

8,000,000 NOK

*The TEASE project aims to predict new Earth-abundant solid state electrolytes for safer energy dense Li-ion batteries using the latest computational simulation methods.*

## Peer Reviewed Publications

(In reverse chronological order)

As of January 2026:

- Total Citations: 1748

38. *Spatial distribution of crystalline impurities in degraded high voltage XLPE cable screens using synchrotron wide-angle X-ray scattering*  
S. B. Hårberg, O. G. Grendal, **B.A.D. Williamson**, H. Strand, M. Burghammer, S. Hvidsten, M.-A. Einarsrud, *Journal of Physics: Energy*, 8 015016, (2026)  
DOI: <https://iopscience.iop.org/article/10.1088/2515-7655/ae34e8>
37. *Quantifying Emptiness: On the Size of A-Site Vacancies in Tetragonal Tungsten Bronzes*  
C. R. Zeiger, K. Eggestad, J. Walker, M.-A. Einarsrud, **B.A.D. Williamson**, and T. Grande *Chemistry of Materials*, ASAP, (2025)  
DOI: 10.1021/acs.chemmater.4c03438
36. *Phase Evolution and Thermodynamics of Cubic  $\text{Li}_{6.25}\text{Al}_{0.25}\text{La}_3\text{Zr}_2\text{O}_{12}$  Studied by High-Temperature X-ray Diffraction*  
Ø. Gullbrekken, K. Eggestad, M. Tsoutsouva, **B.A.D. Williamson**, D. Rettenwander, M.-A. Einarsrud, and S. M. Selbach *Inorganic Chemistry*, 64, 12, 5866-5865, (2025)  
DOI: 10.1021/acs.inorgchem.4c03738
35. *Pseudo-Lithium Vacancies in Hydrogen Rich  $\text{Li}_3\text{OCl}$*   
**B.A.D. Williamson**, K. Eggestad, S. M. Selbach *J. Mater. Chem. A*, 13, 8816-8824, (2025)  
DOI: 10.1039/D4TA08352K
34. *Crystal Structure, Cation Occupation, and Phase Transitions in  $\text{Ba}_4(\text{Li}_x\text{Na}_{1-x})_2\text{Nb}_{10}\text{O}_{30}$  Tetragonal Tungsten Bronzes*  
N. S. Løndal, **B.A.D. Williamson**, O.G. Grendal, J. Walker, M.-E. Einarsrud, and T. Grande, *Inorganic Chemistry*, Advance Article, (2024)  
DOI: 10.1021/acs.inorgchem.4c04461
33. *Mobile Intrinsic Point Defects for Conductive Neutral Domain Walls in  $\text{LiNbO}_3$*   
K. Eggestad, **B.A.D. Williamson**, D. Meier, and S. M. Selbach, *J. Mater. Chem. C*, 12, 17099-17107, (2024)  
DOI: 10.1039/D4TC02856B
32. *Doping Implications of Li-ion Solid State Electrolyte  $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$*   
K. Eggestad, S. M. Selbach, and **B.A.D. Williamson**, *J. Mater. Chem. A*, 12, 15666-15675, (2024)  
DOI: 10.1039/D4TA01487A  
Work selected as one of the Journal of Materials Chemistry A HOT Papers 2024
31. *On the solubility of Bi in tetragonal tungsten bronzes*  
C. R. Zeiger; **B.A.D. Williamson**; J. Walker, M.-A. Einarsrud, T. Grande. *J. Euro. Ceram. Soc.*, 44, 6, 3723-3733 (2024)  
DOI: 10.1016/j.jeurceramsoc.2024.01.005
30. *The effect of cation size on structure and properties of Ba-based tetragonal tungsten bronzes  $\text{Ba}_4\text{M}_2\text{Nb}_{10}\text{O}_{30}$  ( $\text{M} = \text{Na}, \text{K}$  or  $\text{Rb}$ ) and  $\text{Ba}_4\text{M}_2\text{Nb}_8\text{Ti}_2\text{O}_{30}$  ( $\text{M} = \text{Ca}$  or  $\text{Sr}$ )*  
N. S. Løndal; **B.A.D. Williamson**; J. Walker, M.-A. Einarsrud, T. Grande. *Phys. Chem. Chem. Phys.*, 26, 3350-3366 (2024)  
DOI: 10.1039/D3CP05666J
29. *Oxygen absorption in nanocrystalline  $h\text{-RMnO}_3$  ( $\text{R} = \text{Y}, \text{Ho}, \text{Dy}$ ) and the effect of Ti donor doping*  
F. Danmo; **B.A.D. Williamson**; D. Småbråten, N. Gaukås, E.R. Østli, T. Grande; J. Glaum; S. Selbach; *Chem. Mater.*, 34, 15, 5764-5776 (2023)  
DOI: 10.1021/acs.chemmater.3c00189
28. *Multi-Phase Sputtered  $\text{TiO}_2$ -Induced Current–Voltage Distortion in  $\text{Sb}_2\text{Se}_3$  Solar Cells*  
C.H. Don, T.P. Shalvey, M.J. Smiles, L. Thomas, L.J. Phillips, T.D.C. Hobson, H. Finch, L.A.H. Jones, J.E.N. Swallow, N. Fleck, C. Markwell, P.K. Thakur, T.-L. Lee, D. Biswas, L. Bowen, **B.A.D. Williamson**, D.O. Scanlon, V.R. Dhanak, K. Durose, T.D. Veal, J.D. Major; *Adv. Mater. Int.*, 2300238 (2023)  
DOI: 10.1002/admi.202300238

27. *High-throughput calculations of charged point defect properties with semi-local density functional theory performance benchmarks for materials screening applications*  
D. Broberg, K. Bystrom, S. Srivastava, D. Dahliah, **B.A.D. Williamson**, L. Weston, D. O. Scanlon, G.-M. Rignanese, S. Dwaraknath, J. Varley, K. A. Persson, M. Asta, G. Hautier; *npj Comp. Mater.*, 9, 1, 72 (2023)  
DOI: 10.17188/mpcontributes/1907859
26. *Tuning the Thermoelectric Performance of CaMnO<sub>3</sub>-based ceramics by controlled exsolution and microstructuring*  
N. Kanas, **B.A.D. Williamson**, F. Steinbach, R. Hinterding, M-A. Einarsrud, S.M. Selbach, A. Feldhoff and K. Wiik; *ACS Appl. Energy Mater.*, 5, 10, 12396–12407 (2022)  
DOI: 10.1021/acsaem.2c02012
25. *Computational Prediction and Experimental Realisation of Earth Abundant Transparent Conducting Oxide Gated ZnSb<sub>2</sub>O<sub>6</sub>*  
A. J. Jackson, B. J. Parrett, J. Willis, A. M. Ganose, W. W. W. Leung, **B.A.D. Williamson**, Y. Liu, T. K. Kim, M. Hoesch, L. Ishibe-Veiga, R. Kalra, J. Neu, C. A. Schmuttenmaer, T.-L. Lee, A. Regoutz, T. D. Veal, R. G. Palgrave, R. Perry and D. O. Scanlon; *ACS Energy Lett.* 2022, 7, XXX, 3807–3816, (2022)  
DOI: 10.1021/acsenerylett.2c01961
24. *Mesophase transition in [(C<sub>2</sub>H<sub>5</sub>)N][FeBrCl<sub>3</sub>] and [(CH<sub>3</sub>)<sub>4</sub>N][FeBrCl<sub>3</sub>] ferroic plastic crystals*  
J. Walker, K. P. Marshall, **B.A.D. Williamson**, J.S. Beceiro, N. S. Løndal, S. M. Selbach, S. C. Garcia, D. Chernyshov, M-A. Einarsrud; *Chem. Mater.*, 34, 6, 2585-2598, (2022)  
DOI: 10.1021/acs.chemmater.1c03778
23. *Investigation of factors affecting the stability of compounds formed by isovalent substitution in layered oxychalcogenides, leading to identification of Ba<sub>3</sub>Sc<sub>2</sub>O<sub>5</sub>Cu<sub>2</sub>Se<sub>2</sub>, Ba<sub>3</sub>Y<sub>2</sub>O<sub>5</sub>Cu<sub>2</sub>S<sub>2</sub>, Ba<sub>3</sub>Sc<sub>2</sub>O<sub>5</sub>Ag<sub>2</sub>Se<sub>2</sub> and Ba<sub>3</sub>In<sub>2</sub>O<sub>5</sub>Ag<sub>2</sub>Se<sub>2</sub>*  
G. J. Limburn, D. W. Davies, N. Langridge, Z. Malik, **B. A. D. Williamson**, D. O. Scanlon, and G. Hyett; *J. Mater. Chem. C*, 10, 3784-3795, (2022)  
DOI: 10.1039/D1TC05051F
22. *Ligand Field-Induced Exotic Dopant for Infrared Transparent Electrode: W in Rutile SnO<sub>2</sub>*  
M. Fukumoto, Y. Hirose, **B.A.D. Williamson**, S. Nakao, K. Kimura, K. Hayashi, Y. Sugisawa, D. Sekiba, D.O. Scanlon and T. Hasegawa; *Adv. Func. Mater.*, 2110832, (2021)  
DOI: 10.1002/adfm.202110832
21. *BaBi<sub>2</sub>O<sub>6</sub>: A Promising n-Type Thermoelectric Oxide with the PbSb<sub>2</sub>O<sub>6</sub> Crystal Structure*  
K.B. Spooner, A.M. Ganose, W.W.W.Leung, J.Buckeridge, **B.A.D. Williamson**, R.G. Palgrave, and D.O. Scanlon, *Chem. Mater.*, <https://pubs.acs.org/doi/10.1021/acs.jpcc.0c11592>pted, 33, 7441, (2021)  
DOI: 10.1021/acs.chemmater.1c02164
20. *Experimental and theoretical study of the electronic structures of lanthanide indium perovskites LnInO<sub>3</sub>*  
P. Hartley, K.H.L. Zhang, M.V. Hohmann, L.F.J. Piper, D.J. Morgan, R.G. Edgell, D.O. Scanlon, **B.A.D. Williamson**, and A. Regoutz; *J. Phys. Chem. C*, 125, 6387, (2021)  
DOI: 10.1021/acs.jpcc.0c11592
19. *Photocatalytic, Structural and Optical Properties of Mixed Anion Solid Solutions Ba<sub>3</sub>Sc<sub>2-x</sub>In<sub>x</sub>Cu<sub>2</sub>S<sub>2</sub> and Ba<sub>3</sub>In<sub>2</sub>O<sub>5</sub>Cu<sub>2</sub>S<sub>2-y</sub>Se<sub>y</sub>*  
G. Limburn, M. Stephens, **B.A.D. Williamson**, A. Iborra-Torres, D.O. Scanlon and G. Hyett; *J. Mater. Chem. A*, 8, 19887-19897 (2020)  
DOI: 10.1039/D0TA06629J
18. *Computationally Driven Discovery of Layered Quinary Oxychalcogenides: Potential p-Type Transparent Conductors?*  
**B.A.D. Williamson**, G.J. Limburn, G. Hyett, G. W. Watson and D.O. Scanlon; *Matter, Cell Press*, 3,3, 759-781 (2020)  
DOI: 10.1016/j.matt.2020.05.020  
*Article Preview by A. Walsh and J-S. Park: The Holy Grail of Transparent Electronics*  
DOI: 10.1016/j.matt.2020.08.008
17. *Computational Prediction of the Thermoelectric Performance of LaZnOPn (Pn = P, As)*  
M. Einhorn, **B.A.D. Williamson** and D.O. Scanlon; *J. Mater. Chem. A*, 8, 7914-7924 (2020)  
DOI: 10.1039/D0TA00690D

16. *Resonant Ta Doping for Enhanced Mobility in Transparent Conducting SnO<sub>2</sub>*  
**B.A.D. Williamson**, T.J. Featherstone, S. Sathasivam, J.E.N Swallow, H. Shiel, L.A.H. Jones, M.J. Smiles, A. Regoutz, T-L. Lee, X. Xia, C. Blackman, P.K. Thakur, C.J. Carmalt, I.P. Parkin, T.D. Veal and D.O. Scanlon; *Chem. Mater.*, 32, 5, 1964-1973 (2020)  
 DOI: 10.1021/acs.chemmater.9b04845  
 Work featured on the front cover
15. *Enhanced Photocatalytic and Antibacterial Ability of Cu-doped Anatase TiO<sub>2</sub> Thin Films: Theory and Experiment*  
 A.M. Alotaibi, **B.A.D. Williamson**, S. Sathasivam, A. Kafizas, M. Alqahtani, C. Sotelo-Vazquez, J. Buck-  
 eridge, J. Wu, S.P. Nair, D.O. Scanlon and I.P. Parkin; *ACS Appl. Mater. Interfaces* just accepted manuscripts  
 (2020)  
 DOI: 10.1021/acsami.9b22056
14. *Resonant Doping for High Mobility Transparent Conductors: The Case of Mo-doped In<sub>2</sub>O<sub>3</sub>*  
 J.E.N. Swallow, **B.A.D. Williamson**, S. Sathasivam, M. Birkett, T.J. Featherstone, P.A.E. Murgatroyd, H.J.  
 Edwards, Z.W. Lebens-Higgins, D.A. Duncan, M. Farnworth, P. Warren, N. Peng, T-L. Lee, L.F.J. Piper, A.  
 Regoutz, C.J. Carmalt, I.P. Parkin, V.R. Dhanak, D.O. Scanlon and T.D. Veal; *Mater. Horiz.*, 7, 236-243  
 (2020)  
 DOI: 10.1039/C9MH01014A
13. *Dispelling the Myth of Passivated Codoping in TiO<sub>2</sub>*  
**B.A.D. Williamson**, J. Buckridge, N.P. Chadwick, S. Sathasivam, C.J. Carmalt, I.P. Parkin and D.O. Scanlon;  
*Chem. Mater.*, 31 (7), 2577-2589 (2019)  
 DOI: 10.1021/acs.chemmater.9b00257
12. *Origin of High-Efficiency Photoelectrochemical Water Splitting on Hematite/Functional Nanohybrid Metal Ox-  
 ide Overlayer Photoanode after a Low Temperature Inert Gas Annealing Treatment*  
 S. Ho-Kimura, **B.A.D. Williamson**, S. Sathasivam, S.J.A. Moniz, G. He, W. Luo, D.O. Scanlon, J. Tang, I.P.  
 Parkin; *ACS Omega*, 4 (1), 1449-1459 (2019)  
 DOI: 10.1021/acsomega.8b02444
11. *Phosphorus Doped SnO<sub>2</sub> Thin Films for Transparent Conducting Oxide Applications: Synthesis, Optoelectronic  
 Properties and Computational Models*  
 M.J. Powell, **B.A.D. Williamson**, S-Y. Baek, J. Manzi, D. Potter, D.O. Scanlon and C.J. Carmalt; *Chem. Sci.*,  
 9 (41), 7968-7980 (2018)  
 DOI: 10.1039/C8SC02152J
10. *Enhanced Electrical Properties of Antimony Doped Tin Oxide Thin Films Deposited via Aerosol Assisted Chemical  
 Vapour Deposition*  
 S. Ponja, **B.A.D. Williamson**, S. Sathasivam, D.O. Scanlon, I.P. Parkin, C.J. Carmalt; *J. Mater. Chem. C*, 6,  
 7257-7266 (2018)  
 DOI: 10.1039/C8TC01929K
9. *A Novel Laboratory-based Hard X-ray Photoelectron Spectroscopy System*  
 A. Regoutz, M. Mascheck, T. Wiell, S.K. Eriksson, C. Liljenberg, K. Tetzner, **B.A.D. Williamson**, D. O. Scan-  
 lon and P. Palmgren; *Rev. Sci. Instr.*, 89 (7), 073105 (2018)  
 DOI: 10.1063/1.5039829
8. *Chemical Vapor Deposition of Photocatalytically Active Pure Brookite TiO<sub>2</sub> Thin Films*  
 A.M. Alotaibi, S. Sathasivam, **B.A.D. Williamson**, A. Kafizas, C. Sotelo-Vazquez, A. Taylor, D.O. Scanlon,  
 and I.P. Parkin; *Chem. Mater.*, 30 (4), 1353-1361 (2018)  
 DOI: 10.1021/acs.chemmater.7b04944
7. *A Deeper Understanding of Interstitial Boron-Doped Anatase Thin Films as A Multifunctional Layer Through  
 Theory and Experiment*  
 M. Quesada-Gonzalez, **B.A.D. Williamson**, C. Sotelo-Vazquez, A. Kafizas, N.D. Boscher, R. Quesada-  
 Cabrera, D.O. Scanlon, C.J. Carmalt, I.P. Parkin; *J. Phys. Chem. C*, 122 (1), 714-726 (2018)  
 DOI: 10.1021/acs.jpcc.7b11142
6. *Self-Compensation in Transparent Conducting F-Doped SnO<sub>2</sub>*  
 J.E.N. Swallow, **B.A.D. Williamson**, T.J. Whittles, M. Birkett, T.J. Featherstone, N. Peng, A. Abbott, M.  
 Farnworth, K.J. Cheetham, P. Warren, D.O. Scanlon, V.R. Dhanak, T.D. Veal; *Adv. Funct. Mater.*, 1701900  
 (2017)  
 DOI: 10.1002/adfm.201701900

5. *Chemical Vapor Deposition Synthesis and Optical Properties of Nb<sub>2</sub>O<sub>5</sub> Thin Films with Hybrid Functional Theoretical Insight into Band Structure and Band Gaps*  
S. Sathasivam, **B.A.D. Williamson**, S.A. Al Thabaiti, A.Y. Obaid, S.N. Basahel, M. Mokhtar, D.O. Scanlon, C.J. Carmalt, I.P. Parkin; *ACS Appl. Mater. Interfaces*, 9 (21), 18031-18038 (2017)  
DOI: 10.1021/acsami.7b00907
4. *Computational and Experimental Study of Ta<sub>2</sub>O<sub>5</sub> Thin Films*  
S. Sathasivam, **B.A.D. Williamson**, A. Kafizas, S.A. Althabaiti, A.Y. Obaid, S.N. Basahel, D.O. Scanlon, C.J. Carmalt, I.P. Parkin; *J. Phys. Chem. C*, 121 (1), 202-210 (2017)  
DOI: 10.1021/acs.jpcc.6b11073
3. *Transparent Conducting n-type ZnO:Sc – Synthesis, Optoelectronic Properties and Theoretical Insight*  
S.C. Dixon, S. Sathasivam, **B.A.D. Williamson**, D.O. Scanlon, C.J. Carmalt, I.P. Parkin; *J. Mater. Chem. C*, 5, 7585-7597 (2017)  
DOI: 10.1039/C7TC02389H
2. *Engineering Valence Band Dispersion for High Mobility p-Type Semiconductors*  
**B.A.D. Williamson**, J. Buckeridge, J. Brown, S. Ansbro, R.G. Palgrave, D.O. Scanlon; *Chem. Mater.*, 29 (6), 2402-2413 (2017)  
DOI: 10.1021/acs.chemmater.6b03306  
Work featured as part of the front cover
1. *A Single-Source Precursor Approach to Solution Processed Indium Arsenide Thin Films*  
P. Marchand, S. Sathasivam, **B.A.D. Williamson**, D. Pugh, S.M. Bawaked, S.N. Basahel, A.Y. Obaid, D.O. Scanlon, I.P. Parkin, C.J. Carmalt; *J. Mater. Chem. C*, 4, 6761-6768 (2016)  
DOI: 10.1039/C6TC02293F

### *In Submission*

5. *Local indirect magnetoelectric coupling at twin walls in CaMnO<sub>3</sub>*  
I. C. Skogvoll, **B.A.D. Williamson**, and S. M. Selbach  
arxiv, (2025) DOI: <https://arxiv.org/abs/2511.13506>
4. *Domain Walls and Defects in Ferroelectric Inorganic Halide Perovskites CsGeX<sub>3</sub> (X = Cl, Br, I)*  
K. Eggestad, **B.A.D. Williamson**, S.M. Selbach in submission,  
arxiv: <https://doi.org/10.48550/arXiv.2511.07194>
3. *Finite-Temperature Ferroelectric Phase Transitions from Machine-Learned Force Fields*  
K. Eggestad, I. C. Skogvoll, Ø. Gullbrekken, **B.A.D. Williamson**, S.M. Selbach in submission,  
arxiv: <https://doi.org/10.48550/arXiv.2510.25439>
2. *Resonant XX Doping for High-Mobility In<sub>2</sub>O<sub>3</sub>-Based Conductors with Enhanced Near-Infrared Transparency*  
T. J. Featherstone, J. Willis, J.E.N. Swallow, **B.A.D. Williamson**, L.A.H. Jones, T.-Li. Lee, P.K. Thakur, G.W. Watson, T. Koida, D.O. Scanlon, and T.D. Veal; in submission
1. *Effect of pseudo-cubic (111)-oriented orthorhombic substrate facets on perovskite oxide thin film synthesis*  
K. Kjærnes, T. Bolstad, D.M. Evans, E. Lysne, **B.A.D. Williamson**, D. Meier, S.M. Selbach, T. Tybell; in submission

### Conference Presentations

1. **Invited:** B.A.D Williamson: *Understanding CO<sub>2</sub> Transport using ARCS: Automated Reactions for CO<sub>2</sub> Storage*, MATHIAS Days conference, Total Energies, Paris, France 2024 – Talk
2. **Contributed:** B.A.D Williamson: *Computational Analysis of a Promising Earth Abundant, Stable, Lithium Solid Electrolyte.*, MRS Spring, Seattle, USA 2024 – Talk
3. **Invited:** B.A.D Williamson: *Approaches to Overcoming the Challenges of Ab Initio Prediction of Functional Plastic Crystals.*, NMBU Advancing Functional Molecular Matter , NMBU, Ås, Norway 2024 – Talk
4. **Contributed:** B.A.D. Williamson *First Principles Insights into Phase Transitions, Disorder and Electronic Properties of Lead-Free Ba-based Tetragonal Tungsten Bronzes.*, IMF Ferroelectrics, Tel Aviv, Israel 2023 –Talk
5. **Contributed:** B.A.D. Williamson *Can we Utilise Phonons to Enhance Li-ion Diffusion?*, MRS Fall Meeting, Boston, USA 2022 –Talk

6. **Contributed:** B.A.D. Williamson *The Underlying Mechanisms of Ultrahigh Mobility in Bi<sub>2</sub>O<sub>2</sub>Se using Self-Consistent GW Method*, MRS Spring Meeting, Honolulu, USA 2022 –Talk
7. **Contributed:** B.A.D Williamson: *Computational discovery of an earth abundant, stable Li solid electrolyte*, FACET Sustainability Workshop, Trondheim, Norway 2021 –Talk
8. **Contributed:** B.A.D Williamson: *Computational discovery of an earth abundant, stable Li solid electrolyte*, FACET Sustainability Workshop, Trondheim, Norway 2021 –Talk
9. **Contributed:** B.A.D Williamson: *Computational Insights into Li diffusion in Solid State Electrolytes*, 7th Inorganic and Materials Norsk Kjemisk Selskap (NKS) Meeting, Værnes, Norway 2020 –Talk
10. **Contributed:** B.A.D Williamson: *Resonant Doping for High Mobility Transparent Conductors: The Case of Mo-doped In<sub>2</sub>O<sub>3</sub>*, 11th Petite Workshop on defects in energy materials; Sommarøy, Norway 2019 – Talk
11. **Contributed:** B.A.D Williamson: *Computationally Aided Discovery of Layered Quinary Oxychalcogenide p-type Transparent Conductor*, Workshop For Atomistic Modelling; Trondheim, Norway 2019 – Poster
12. **Contributed:** B.A.D Williamson: *Dispelling the Myth of Passivated Codoping in TiO<sub>2</sub>*, MRS Fall Meeting; Boston US, 2018 – Talk
13. **Contributed:** B.A.D.Williamson: *Computationally Aided Discovery of Layered Quinary Oxychalcogenide p-type Transparent Conductors*, MRS Fall Meeting; Boston US, 2018 – Poster  
**Winner of the ICDD prize for materials characterisation**
14. **Contributed:** B.A.D Williamson: *Doubled Conductivity in Transparent Conducting In<sub>2</sub>O<sub>3</sub> Through Novel Dopant Design*, MMM Hub; Thomas Young Centre, London, UK, 2018 – Poster
15. **Invited:** B.A.D Williamson: *Doubled Conductivity in Transparent Conducting In<sub>2</sub>O<sub>3</sub> Through Novel Dopant Design*, MCC 3rd Conference, Lincoln UK, 2018 – Talk
16. **Contributed:** B.A.D Williamson: *Doubled Conductivity in Transparent Conducting In<sub>2</sub>O<sub>3</sub> Through Novel Dopant Design*, Gordon Research Conference; Defects In Semiconductors, Colby-Sawyer College, New Hampshire, US, 2018 – Poster
17. **Invited:** B.A.D Williamson: *Beyond Conventional Doping in SnO<sub>2</sub>*, Thomas Young Centre, London UK, 2017 – Talk
18. **Contributed:** B.A.D Williamson: *Beyond Conventional Doping in SnO<sub>2</sub>*, E-MRS; Spring Meeting, Strasbourg France, 2017 – Poster
19. **Contributed:** B.A.D Williamson: *Engineering Valence Band Dispersion For High-Mobility p-type Semiconductors*, E-MRS; Spring Meeting, Strasbourg France, 2017 – Talk
20. **Contributed:** B.A.D Williamson: *Engineering Valence Band Dispersion For High-Mobility p-type Semiconductors*, MRS Fall Meeting; Boston US, 2016 – Poster
21. **Contributed:** B.A.D Williamson: *Engineering Valence Band Dispersion For High-Mobility p-type Semiconductors*, SSCG Christmas Meeting; Canterbury UK, 2015 – Poster

## Industrial Collaborations

- 2023 – Present     Hydro ([www.hydro.com](http://www.hydro.com))  
 2021 – Present:     Equinor ([www.equinor.com](http://www.equinor.com))  
                              Northern Lights ([www.northernlightsccs.com](http://www.northernlightsccs.com))  
                              Total Energies ([www.totalenergies.com](http://www.totalenergies.com))  
                              Shell ([www.shell.com](http://www.shell.com))  
 2014 – 2019:       Pilkingtons NSG Group ([www.pilkington.com](http://www.pilkington.com))

## Teaching and Mentoring

- 2025 – Present:     Main supervisor to 1 PhD student  
 2022 – Present:     Co-supervisor to 3 PhD students  
 2019 – Present:     Proposed and supervised 7 final year Masters research projects at NTNU  
 2021:                   Lecturer of Masters Course "TMT4245 FUNCTIONAL MATERIALS" at NTNU  
 2014 – 2019:       Supervised 6 final year MSci research projects at UCL  
 2014 – 2019:       Demonstrated in 1<sup>st</sup> year workshops (CHEM1004)  
 2018 – 2019:       Tutor in 1<sup>st</sup> year inorganic chemistry courses at UCL (CHEM1101 and CHEM0013)

## Computational Competance

UNIX/BASH/ZSH proficiency: high  
Python proficiency: high  
LaTEX proficiency: high  
VASP proficiency: high  
Adobe Creative Cloud proficiency: high

## Other Experience

2022 – Present: Website, design, and general IT responsibility for the FACET group, NTNU

## References

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