

## Complete list of publications of Dr. Ibrahim Abdelwahab

### A) Monograph

1. **Ibrahim Abdelwahab** (2019). *LINEAR AND NONLINEAR OPTICAL STUDIES OF TWO-DIMENSIONAL PEROVSKITES* [Doctoral dissertation]. Spiral: Imperial College Digital Repository
2. **Ibrahim Abdelwahab** (2013). *ULTRA-BRIGHT ELECTRON SOURCES BASED ON MILLIMETER LONG CARBON NANOTUBES* [Master's Thesis]. Lund University, Sweden

### B) Publications with peer review process († = Equal contributions, \* = Corresponding author)

1. **Ibrahim Abdelwahab**†, Dushyant Kumar†, Tiejuan Bian†, Haining Zheng, Heng Gao, Fanrui Hu, Arthur McClelland, Kai Leng, William L. Wilson, Jun Yin\*, Hyunsoo Yang\* & Kian Ping Loh\*, “*Two-Dimensional Chiral Perovskites with Large Spin Hall Angle and Collinear Spin Hall Conductivity*”, *Science* 385, 311 (2024)
2. Haining Zheng†, Arup Ghosh†, M. J. Swamynadhan†, Gang Wang, Oihan Zhang, Xiao Wu, **Ibrahim Abdelwahab**, Walter P. D. Wong, Qing-Hua Xu, Saurabh Ghosh, Jingsheng Chen, Branton J. Campbell, Alessandro Stroppa\*, Junhao Lin\*, Ramanathan Mahendiran\* & Kian Ping Loh\*, “*Electron Spin Decoherence Dynamics in Magnetic Manganese Hybrid Organic-Inorganic Crystals: The Effect of Lattice Dimensionality*”, *Journal of the American Chemical Society* 145, 18549 (2023)
3. Chaofei Liu†, Xiuying Zhang†, Xinyun Wang†, Ziyang Wang†, **Ibrahim Abdelwahab**, Ivan Verzhbitskiy, Yan Shao, Goki Eda, Wanxin Sun, Lei Shen & Kian Ping Loh\*, “*Ferroelectricity in Niobium Oxide Dihalides NbOX<sub>2</sub> (X=Cl, I): A Macroscopic- to Microscopic-Scale Study*”, *ACS Nano* 8, 7170 (2023)
4. **Ibrahim Abdelwahab**, Benjamin Tilmann, Xiaoxu Zhao, Ivan Verzhbitskiy, Rodrigo Berté, Goki Eda, William L. Wilson, Gustavo Grinblat, Leonardo de S. Menezes, Kian Ping Loh\* & Stefan A. Maier\*, “*Highly Efficient Sum-Frequency Generation in Niobium Oxydichloride NbOCl<sub>2</sub> Nanosheets*”, *Advanced Optical Materials* 11, 2202833 (2023)
5. Tingting Yin†, Hejin Yan†, **Ibrahim Abdelwahab**, Yulia Lekina, Xujie Lü, Wenge Yang, Handong Sun, Kai Leng, Yongqing Cai\*, Zexiang Shen\* & Kian Ping Loh\*, “*Pressure Driven Rotational Isomerism in 2D Hybrid Perovskites*” *Nature Communications* 14, 411 (2023)
6. Ebtisam Saeed, **Ibrahim Abdelwahab** & Abdalla Abdelwahab\*, “*Ni-Co-P Functionalized Nitrogen-Doped-Carbon Quantum Dots for Efficient Methanol Electrooxidation and Nanofluid Applications*”, *Journal of Electroanalytical Chemistry* 928, 117083 (2023)
7. **Ibrahim Abdelwahab**\* & Abdalla Abdelwahab\*, “*Black Phosphorous/Palladium Functionalized Carbon Aerogel Nanocomposite for Highly Efficient Ethanol Electrooxidation*”, *RSC Advances* 12, 31225 (2022)
8. Jianhui Fu, Qiang Xu, **Ibrahim Abdelwahab**, Rui Cai, Benny Febriansyah, Tingting Yin, Kian Ping Loh, Nripan Mathews, Handong Sun & Tze Chien Sum\*, “*Strain Propagation in Layered Two-dimensional Halide Perovskites*”, *Science Advances* 8, eabq1971 (2022)
9. **Ibrahim Abdelwahab**, Benjamin Tilmann, Yaze Wu, David Giovanni, Ivan Verzhbitskiy, Menglong Zhu, Rodrigo Berté, Fengyuan Xuan, Leonardo de S. Menezes, Goki Eda, Tze Chien Sum, Su Ying Quek, Stefan A. Maier\* & Kian Ping Loh\*, “*Giant Second-Harmonic Generation in Ferroelectric NbOCl<sub>2</sub>*”, *Nature Photonics* 16, 644 (2022)  
Featured in: Rupert F. Oulton, Jefferson Flórez & Alex S. Clark. “*Ferroelectric nanosheets boost nonlinearity*”, *Nature Photonics* 16, 611 (2022)

10. Mykola Telychko†, Shayan Edalatmanesh†, Kai Leng†, **Ibrahim Abdelwahab**, Na Guo, Chun Zhang, Jesús I. Mendieta-Moreno, Matyas Nachtigall, Jing Li, Kian Ping Loh\*, Pavel Jelínek\* & Jiong Lu\*, “Sub-angstrom Non-invasive Imaging of Atomic Arrangement in 2D Hybrid Perovskites”, *Science Advances* 8, eabj0395 (2022)
11. Yaze Wu†, **Ibrahim Abdelwahab**†, Ki Chang Kwon, Ivan Verzhbitskiy, Weng Heng Liew, Kui Yao, Goki Eda, Yuan Ping Feng, Kian Ping Loh\*, Lei Shen\* & Su Ying Quek\*, “Data-driven Discovery of High Performance Piezoelectric 2D NbOI<sub>2</sub>”, *Nature Communications* 13, 1884 (2022)
12. Yan Shao, Wei Gao, Hejin Yan, Runlai Li, **Ibrahim Abdelwahab**, Xiao Chi, Lukas Rogée, Lyuchao Zhuang, Wei Fu, Shu Ping Lau, Siu Fung YU\*, Yongqing Cai\*, Kian Ping Loh\* & Kai Leng\*, “Unlocking Surface Octahedral Tilt in Two-dimensional Ruddlesden-Popper Perovskites”, *Nature Communications* 13, 138 (2022)
13. Wei Yu†, Zikai Dong†, **Ibrahim Abdelwahab**†, Xiaoxu Zhao, Jia Shi, Yan Shao, Xiao Hu, Runlai Li, Jing Li, Teng Ma, Zhe Wang, Qinghua Xu, Dingyuan Tang, Yanrong Song\* & Kian Ping Loh\*, “High-yield Exfoliation of Monolayer 1T'-MoTe<sub>2</sub> as Saturable Absorber for Ultrafast Photonics”, *ACS Nano* 15, 18448 (2021)
14. Zhi Chen, Wei Fu, Lin Wang, Wei Yu, Haohan Li, Clement Kok Yong Tan, **Ibrahim Abdelwahab**, Yan Shao, Chenliang Su, Mingzi Sun, Bolong Huang & Kian Ping Loh\*, “Atomic Imaging of Electrically Switchable Striped Domains in  $\beta$ -In<sub>2</sub>Se<sub>3</sub>”, *Advanced Science* 8, 2100713 (2021)
15. Yuji Gao, Dat T. Nguyen, Trifanny Yeo, Su Bin Lim, Wei Xian Tan, Leigh Edward Madden, Lin Jin, Ji Yong Kenan Long, Fazila Abu Bakar Aloweni, Yi Jia Angela Liew, Mandy Li Ling Tan, Shin Yuh Ang, Sivagame D/O Maniya, **Ibrahim Abdelwahab**, Kian Ping Loh, Chia-Hung Chen, David Laurence Becker, David Leavesley, John S. Ho & Chwee Teck Lim\*, “A Flexible Multiplexed Immunosensor for Point-of-care In Situ Wound Monitoring”, *Science Advances* 7, eabg9614 (2021)
16. Dechao Geng†\*, **Ibrahim Abdelwahab**†, Xiaofei Xiao, Adrian Cernescu, Wei Fu, Vincenzo Giannini, Stefan A. Maier, Lin Li\*, Wenping Hu, Kian Ping Loh & Hui Ying Yang\*, “One-pot Confined Epitaxial Growth of 2D Heterostructure Arrays”, *ACS Materials Letters* 3, 217 (2021)
17. Kai Leng†, Lin Wang†, Yan Shao, **Ibrahim Abdelwahab**, Gustavo Grinblat, Ivan Verzhbitskiy, Runlai Li, Yongqing Cai, Xiao Chi, Wei Fu, Peng Song, Andriwo Rusydi, Goki Eda, Stefan A. Maier & Kian Ping Loh\*, “Electron Tunneling at the Molecularly Thin 2D Perovskite and Graphene van Waals Interface”, *Nature Communications* 11, 5483 (2020)
18. Lin Wang, Xiaojie Wang, Yishu Zhang, Runlai Li, Teng Ma, Kai Leng, Zhi Chen, **Ibrahim Abdelwahab** & Kian Ping Loh\*, “Exploring Ferroelectric Switching in  $\alpha$ -In<sub>2</sub>Se<sub>3</sub> for Neuromorphic Computing”, *Advanced Functional Materials* 30, 2004609 (2020)
19. Hai-Sen Xu†, Yi Luo†, Xing Li†, Pei Zhen See, Zhongxin Chen, Tianqiong Ma, Lin Liang, Kai Leng, **Ibrahim Abdelwahab**, Lin Wang, Runlai Li, Xiangyan Shi, Yi Zhou, Xiu Fang Lu, Xiaoxu Zhao, Cuibo Liu, Junliang Sun\* & Kian Ping Loh\*, “Single Crystal of a One-dimensional Metallo-covalent Organic Framework”, *Nature Communications* 11, 1434 (2020)
20. Feng Zhou†, **Ibrahim Abdelwahab**†, Kai Leng†, Kian Ping Loh\* & Wei Ji\*, “2D Perovskites with Giant Excitonic Optical Nonlinearities for High-performance Sub-bandgap Photodetection”, *Advanced Materials* 31, 1904155 (2019)
21. In-Hyeok Park, Qiannan Zhang, Ki Chang Kwon, Ziyu Zhu, Wei Yu, Kai Leng, David Giovanni, Hwa Seob Choi, **Ibrahim Abdelwahab**, Qing-Hua Xu, Tze Chien Sum\* & Kian Ping Loh\*, “Ferroelectricity and Rashba Effect in a Two-dimensional Dion-Jacobson Hybrid Organic-inorganic Perovskite”, *Journal of the American Chemical Society* 141, 15972 (2019)
22. Gustavo Grinblat\*, **Ibrahim Abdelwahab**, Michael P. Nielsen, Paul Dichtl, Kai Leng, Rupert F. Oulton, Kian Ping Loh & Stefan A. Maier, “Ultrafast All-optical Modulation in 2D Hybrid Perovskites”, *ACS Nano* 13, 9504 (2019)

23. Wei Yu†, Jing Li†, Tun Seng Heng, Zishen Wang, Xiaoxu Zhao, Xiao Chi, Wei Fu, **Ibrahim Abdelwahab**, Zhongxin Chen, Zhi Chen, Zejun Li, Jun Zhou, Jiong Lu, Yuan Ping Feng, Jun Ding & Kian Ping Loh\*, “Chemically Exfoliated VSe<sub>2</sub> Monolayers with Room-temperature Ferromagnetism”, *Advanced Materials* 31, 1903779 (2019)
24. In-Hyeok Park†, Leiqiang Chu†, Kai Leng, Yu Fong Choi, Wei Liu, **Ibrahim Abdelwahab**, Ziyu Zhu, Zhirui Ma, Wei Chen, Qing-Hua Xu, Goki Eda & Kian Ping Loh\*, “Highly Stable Two-dimensional Tin (II) Iodide Hybrid Organic–inorganic Perovskite Based on Stilbene Derivative”, *Advanced Functional Materials* 29, 1904810 (2019)
25. Yang Bao†, Peng Song†, Yanpeng Liu, Zhihui Chen, Menglong Zhu, **Ibrahim Abdelwahab**, Jie Su, Wei Fu, Xiao Chi, Wei Yu, Wei Liu, Xiaoxu Zhao, Qing-Hua Xu, Ming Yang\* & Kian Ping Loh\*, “Gate-Tunable In-plane Ferroelectricity in Few-layer SnS”, *Nano Letters* 19, 5109 (2019)
26. **Ibrahim Abdelwahab**†, Paul Dichtl†, Gustavo Grinblat\*, Kai Leng, Xiao Chi, In-Hyeok Park, Michael P. Nielsen, Rupert F Oulton, Kian Ping Loh\* & Stefan A. Maier\*, “Giant and Tunable Optical Nonlinearity in Single-crystalline 2D Perovskites due to Excitonic and Plasma Effects”, *Advanced Materials* 31, 1902685 (2019)
27. Janardhan Balapanuru†, Kiran Kumar Manga†, Wei Fu, **Ibrahim Abdelwahab**, Guangrong Zhou, Mengxiong Li, Hongbin Lu & Kian Ping Loh\*, “Desalination Properties of a Free-standing, Partially Oxidized Few-layer Graphene Membrane”, *Desalination* 451, 72 (2019)
28. Ziyang Wang†, Yi-Yang Sun†, **Ibrahim Abdelwahab**, Junyong Wang, Leiqiang Chu, Hai Xu\* & Kian Ping Loh\*, “Surface-limited Superconducting Phase Transition on 1T-TaS<sub>2</sub>”, *ACS Nano* 12, 12619 (2018)
29. Tieshan Yang, **Ibrahim Abdelwahab**, Han Lin, Yang Bao, Sherman J. R. Tan, Scott Fraser, Kian Ping Loh\* & Baohua Jia\*, “Anisotropic Third-order Nonlinearity in Pristine and Lithium Hydride Intercalated Black Phosphorus”, *ACS Photonics* 5, 4969 (2018)
30. Kai Leng†, **Ibrahim Abdelwahab**†, Ivan Verzhbitskiy, Mykola Telychko, Leiqiang Chu, Xiao Chi, Na Guo, Wei Fu, Zhihui Chen, Qing-Hua Xu, Chun Zhang, Jiong Lu, Manish Chhowalla, Goki Eda & Kian Ping Loh\*, “Molecularly Thin Two-dimensional Hybrid Perovskites with Tunable Optoelectronic Properties due to Reversible Surface Relaxation”, *Nature Materials* 17, 908 (2018)
31. Fang Cheng, Zijing Ding, Hai Xu, Sherman J. R. Tan, **Ibrahim Abdelwahab**, Jie Su, Pinjia Zhou, Jens Martin\* & Kian Ping Loh\*, “Epitaxial Growth of Single-layer Niobium Selenides with Controlled Stoichiometric Phases”, *Advanced Materials Interfaces* 5, 1800429 (2018)
32. Sherman Jun Rong Tan, Soumya Sarkar, Xiaoxu Zhao, Xin Luo, Yong Zheng Luo, Sock Mui Poh, **Ibrahim Abdelwahab**, Wu Zhou, Thirumalai Venkatesan, Wei Chen\*, Su Ying Quek\* & Kian Ping Loh\*, “Temperature- and Phase-dependent Phonon Renormalization in 1T'-MoS<sub>2</sub>”, *ACS Nano* 12, 5051 (2018)
33. **Ibrahim Abdelwahab**†, Gustavo Grinblat†, Kai Leng, Yi Li, Xiao Chi, Andrivo Rusydi, Stefan A. Maier\* & Kian Ping Loh\*, “Highly-enhanced Third Harmonic Generation in 2D Perovskites at Excitonic Resonances”, *ACS Nano* 12, 644 (2018)
34. Sherman Jun Rong Tan, **Ibrahim Abdelwahab**, Leiqiang Chu, Sock Mui Poh, Yanpeng Liu, Jiong Lu, Wei Chen & Kian Ping Loh\*, “Quasi-monolayer Black Phosphorus with High Mobility and Air Stability”, *Advanced Materials* 30, 1704619 (2018)
35. Wei Liu†, Mani Ulaganathan†, **Ibrahim Abdelwahab**, Xin Luo, Zhongxin Chen, Sherman Jun Rong Tan, Xiaowei Wang, Yanpeng Liu, Dechao Geng, Yang Bao, Jianyi Chen & Kian Ping Loh\*, “Two-dimensional Polymer Synthesized via Solid-state Polymerization for High-performance Supercapacitors”, *ACS Nano* 12, 852 (2018)

36. Jianyi Chen†, Xiaoxu Zhao†, Gustavo Grinblat, Zhongxin Chen, Sherman J. R. Tan, Wei Fu, Zijing Ding, **Ibrahim Abdelwahab**, Yi Li, Dechao Geng, Yanpeng Liu, Kai Leng, Stefan A. Maier, Stephen John Pennycook & Kian Ping Loh\*, “Homoepitaxial Growth of Large-scale Highly Organized Transition Metal Dichalcogenide Patterns”, *Advanced Materials* 30, 1704674 (2018)
37. Sherman J. R. Tan†, **Ibrahim Abdelwahab**†, Zijing Ding, Xiaoxu Zhao, Tieshan Yang, Gabriel Z. J. Loke, Han Lin, Ivan Verzhbitskiy, Sock Mui Poh, Hai Xu, Chang Tai Nai, Wu Zhou, Goki Eda, Baohua Jia & Kian Ping Loh\*, “Chemical Stabilization of 1T' Phase Transition Metal Dichalcogenides with Giant Optical Kerr Nonlinearity”, *Journal of the American Chemical Society* 139, 2504 (2017)
38. Sock Mui Poh, Sherman J. R. Tan, Xiaoxu Zhao, Zhongxin Chen, **Ibrahim Abdelwahab**, Deyi Fu, Hai Xu, Yang Bao, Wu Zhou & Kian Ping Loh\*, “Large Area Synthesis of 1D-MoSe<sub>2</sub> Using Molecular Beam Epitaxy”, *Advanced Materials* 29, 1605641 (2017)
39. Wei Liu†, Xin Luo†, Yang Bao†, Yan Peng Liu, Guo-Hong Ning, **Ibrahim Abdelwahab**, Linjun Li, Chang Tai Nai, Zhi Gang Hu, Dan Zhao, Bin Liu, Su Ying Quek\* & Kian Ping Loh\*, “A Two-dimensional Conjugated Aromatic Polymer via C-C Coupling Reaction”, *Nature Chemistry* 9, 563 (2017)
40. Hosny Meddeb\*, Twan Bearda, Maria Recaman Payo, **Ibrahim Abdelwahab**, Yaser Abdurraheem, Hatem Ezzaouia, Ivan Gordon, Jozef Szlufcik & Jef Poortmans\*, “Wet Chemical Treatment of Boron Doped Emitters on N-type (100) c-Si Prior to Amorphous Silicon Passivation”, *Applied Surface Science* 328, 140 (2015)
41. Hosny Meddeb\*, Twan Bearda, **Ibrahim Abdelwahab**, Valentina Ferro, Barry O’Sullivan, Yaser Abdurraheem, Hatem Ezzaouia, Ivan Gordon, Jozef Szlufcik & Jef Poortmans\*, “Thermal, Structural and Electrical Study of the Effect of Annealing on the Passivation by Amorphous Silicon of n-type Crystalline (100) Silicon Surfaces”, *Energy Procedia* 55, 818 (2014)

### C) Submitted publications with peer review process

1. **Ibrahim Abdelwahab**†, Zhenyue Wu†, Sandeep Kumar, Houchen Li, Su-Yang Xu, William L. Wilson, Kian Ping Loh, Hyunsoo Yang & Kathy Kai Leng, “Current-induced out-of-plane spin polarization in two-dimensional tin halide perovskites”
2. Nicholas Lin Quan Cheng†, **Ibrahim Abdelwahab**†, A. H. M. Abdul Wasey, Hoon Kiem, Keian Noori, Runrun Xu, Yihan Wu, Fengyuan Xuan, Myung Joon Han, Kian Ping Loh & Su Ying Quek, “Room Temperature magnetic ordering in Li-doped MoTe<sub>2</sub> Monolayers”

### D) Publications without peer review process (Conference Proceedings)

1. Varun Kamboj, **Ibrahim Abdelwahab**, Anirudh Adavi, Ming Lei, Virgil Watkins, Corson Chao, William L. Wilson & Iwnetim Abate, “Nano Imaging of Anisotropic Exciton Polariton in van der Waals Semiconductor WSe<sub>2</sub>”, **APS Joint March and April Meeting** Global Physics Summit 2025, Anaheim, CA, USA (2025)
2. Benjamin Tilmann, **Ibrahim Abdelwahab**, Avinandra Kumar Pandeya, Gustavo Grinblat, Leonardo de S. Menezes, Claudia Felser, Stuart S. P. Parkin, Amilcar Bedoya-Pinto, Kian Ping Loh & Stefan A. Maier, “New Promising Materials for Efficient Nonlinear and Ultrafast Nanophotonics”, 10<sup>th</sup> International Conference on Advanced Materials & Nanotechnology (**AMN10**), Rotorua, New Zealand (2023)
3. Paul Dichtl, **Ibrahim Abdelwahab**, Gustavo Grinblat, Kai Leng, Xiao Chi, In-Hyeok Park, Michael Nielsen, Rupert Oulton, Kian Ping Loh & Stefan Maier, “Giant and Tunable Optical Nonlinearity in Single-crystalline 2D Perovskites due to Excitonic and Plasma Effects”, **QCMC 2020**, Lisbon, Portugal (2020)
4. **Ibrahim Abdelwahab**, “Characterizing 2D Materials with Nanoscale IR Spectroscopy and Imaging”, **2nd ISMI Workshop Focus on nanoIR3 and mIRage**, Singapore (2019) (invited talk)

5. Paul Dichtl, **Ibrahim Abdelwahab**, Gustavo Grinblat, Kai Leng, Xiao Chi, In-Hyeok Park, Michael Nielsen, Rupert Oulton, Kian Ping Loh & Stefan Maier, "*Giant and Tunable Optical Nonlinearity in Single-crystalline 2D Perovskites due to Excitonic and Plasma Effects*", **Frontiers in Optics + Laser Science**, Washington, DC, USA (2019)
6. Tieshan Yang, **Ibrahim Abdelwahab**, Han Lin, Yang Bao, Sherman J. R. Tan, Scott Fraser, Kian Ping Loh & Baohua Jia, "*Anisotropic Kerr Nonlinearity of Lithium Hydride Intercalated Black Phosphorus*", **ICON-2DMAT**, Melbourne, Australia (2018)
7. Gustavo Grinblat, **Ibrahim Abdelwahab**, Toshihiko Shibanuma, Pablo Albella, Kai Leng, Xiao Chi, Andriwo Rusydi, Yi Li, Kian Ping Loh & Stefan A. Maier, "*On the Quest for High-efficiency Third-harmonic Generation on the Nanoscale*", **PIERS**, Toyama, Japan (2018)
8. Tieshan Yang, **Ibrahim Abdelwahab**, Han Lin, Sherman J. R. Tan, Kian Ping Loh & Baohua Jia, "*Polarization and Thickness Dependent Nonlinear Optical Responses of Black Phosphorus*", **SPIE NanoPhotonics Australasia**, Melbourne, Australia (2017)
9. Tieshan Yang, **Ibrahim Abdelwahab**, Han Lin, Sherman J. R. Tan, Kian Ping Loh & Baohua Jia, "*Anisotropic Kerr Nonlinearity of Black Phosphorus*", **IONS KOALA**, Brisbane, Australia (2017)
10. Sherman J. R. Tan, **Ibrahim Abdelwahab**, Kian Ping Loh et. al., "*Chemical Stabilization of 1T' Phase Transition Metal Dichalcogenides*", The **2017 MRS Fall Meeting & Exhibit**, Boston, MA, USA (2017)
11. Sock Mui Poh, Sherman J. R. Tan, Xiaoxu Zhao, Zhongxin Chen, **Ibrahim Abdelwahab**, Deyi Fu, Hai Xu, Yang Bao, Wu Zhou & Kian Ping Loh, "*Controlled Molecular Beam Epitaxial Growth of 2D to 1D MoSe<sub>2</sub>*", The **2017 MRS Fall Meeting & Exhibit**, Boston, MA, USA (2017)
12. **Ibrahim Abdelwahab**, Sherman Jun Rong Tan, Leiqiang Chu & Kian Ping Loh, "*Black Phosphorus Devices with High Mobility and Air Stability*", **ESPMI 9**, Singapore (2017)
13. Kai Leng, Wei Fu, **Ibrahim Abdelwahab** & Kian Ping Loh, "*Optical Properties of 2D Perovskites*", **ICMAT 2017**, Singapore (2017)
14. Robert Morel, Ariel Brenac, Pierre Noé & **Ibrahim Adelwahab**, "*Size Misfit and Elastic Energy Contribution to the Phase Transition of PCM Clusters*", **E\PCOS**, Marseille, France (2014)
15. Robert Morel, Ariel Brenac, Pierre Noé & **Ibrahim Adelwahab**, "*Elastic Energy Contribution to Phase Transition in Confined Clusters*", **GdR Nanoalloys**, Strasbourg, France (2014)
16. Robert Morel, Giada Ghezzi, **Ibrahim Abdelwahab**, Ariel Brenac, Pierre Noé, Sylvain Maîtrejean & Françoise Hippert, "*Phase Change Materials Clusters from Gas-phase Condensation*", **COST Nanoalloy**, Santa Margherita Ligure, Italy (2014)

#### E) Patents

1. Sherman J. R. Tan, **Ibrahim Abdelwahab** & Kian Ping Loh, "*A Chemical Passivation Strategy for Lithium Intercalated Compounds*", **SG Patent** (Patent No 10.201.608.955 Y) (2016)