|  |  |
| --- | --- |
| PERSONAL INFORMATION | PHAM Thanh Trung |
|  | 4/202 - Rue Joseph Grafé, 5000 Namur, Belgium |
| +32 - 487 11 62 09 |
| trung.phamthanh@unamur.be; trungpt2016@gmail.com |
| Sex male | Date of birth 16/06/1979 | Nationality Vietnamese |

|  |  |
| --- | --- |
| WORK EXPERIENCE |  |

|  |  |
| --- | --- |
| From 08/2018 to present | Postdoctoral researcher |
|  | University of Namur (https://unamur.be/)  61-Rue de Bruxelles, B-5000 Namur, Belgium |
| Project: MBE synthesis and characterization of two-dimensional semiconductors |
| From 06/2016 to 08/2018 | Invited researcher |
|  | SHTP Labs, R&D Center, Saigon Hi-Tech Park ( http://shtplabs.org/)  Lot I3, N2 street, District 9, Ho Chi Minh city, Vietnam |
| Project: CVD growth of graphene and gas sensing devices |
| From 03/2016 to 08/2018 | Lecturer |
|  | HCMC University of Technology and Education (https://hcmute.edu.vn/)  01- Vo Van Ngan street, Linh Chieu ward, Thu Duc District, Ho Chi Minh city, Vietnam |
| Role: Lecture on Introduction to Materials Technology |
| From 11/2015 to 03/2016 | Postdoctoral researcher |
|  | University of Namur (https://unamur.be/)  61-Rue de Bruxelles, B-5000 Namur, Belgium |
| Project: Graphene on Ge(111) by electron beam evaporation |
| From 09/2011 to 09/2015 | Doctoral study in Physics (Matter and Materials Physics) |
|  | University of Namur (https://unamur.be/)  61-Rue de Bruxelles, B-5000 Namur, Belgium |
| Project: Direct growth of graphitic carbon/graphene on Si(111) by using electron beam evaporation |
| From 11/2002 to 09/2011 | Teaching assistant and Lecturer |
|  | HCMC University of Technology and Education ( https://hcmute.edu.vn/)  01- Vo Van Ngan street, Linh Chieu ward, Thu Duc District, Ho Chi Minh city, Vietnam |
| Role: Lecture on General Physics (Mechanics and thermodynamics, Electricity and magnetism) |
| From 10/2008 to 04/2009 | Research fellowships |
|  | University of Kaiserslautern ( https://www.uni-kl.de/en)  Gottlieb-Daimler-Straße 47, 67663 Kaiserslautern, Germany |
| Project: Thin film coating for photoconductive switch |
| From 07/2006 to 07/2007 | Junior researcher |
|  | Nanotechnology Lab, R&D Center, Saigon Hi-Tech Park (http://shtplabs.org/)  Lot I3, N2 street, District 9, Ho Chi Minh city, Vietnam |
| Project: MOCVD of III-V semiconductor for Light Emitting Diode |
| From 09/1999 to 09/2002 | Student job (part time) |
|  | FPT company for hardware and software of computer ( https://www.fpt.com.vn/en)  124 - Suong Nguyet Anh street, Pham Ngu Lao ward, District 1, Ho Chi Minh city, Viet Nam  Role: Software installation and hardware repair |

|  |  |
| --- | --- |
| EDUCATION AND TRAINING |  |

|  |  |
| --- | --- |
| From 09/2011 to 09/2015 | Doctoral study in Physics (Matter and Materials Physics) |
|  | University of Namur (https://unamur.be/)  61-Rue de Bruxelles, B-5000 Namur, Belgium |
| PhD project: Direct growth of graphitic carbon/graphene on Si(111) by using electron beam evaporation |
| From 09/2003 to 09/2005 | Master study in Physics and Electronics |
|  | University of Science - Vietnam national university HCMC (https://en.hcmus.edu.vn/)  227 - Nguyen Van Cu street, District 5, Ho Chi Minh city, Vietnam |
| Master project: Simulation of Resonant Tunneling Diode (RTD) |
| From 09/1998 to 09/2002 | Bachelor study in Physics and Electronics |
|  | University of Science - Vietnam national university HCMC (https://en.hcmus.edu.vn/)  227 - Nguyen Van Cu street, District 5, Ho Chi Minh city, Vietnam |
| Bachelor project: Research and development of magnetic cards for library management |
| From 07/2016 to 12/2016 | Materials coating, characterization and fabrication of pressure MEMS sensors |
|  | SHTP Labs, R&D Center, Saigon Hi-Tech Park  Lot I3, N2 street, District 9, Ho Chi Minh city, Vietnam  Website: http://shtplabs.org/ |
| Training project: Principle of MEMS technology  Design techniques  Materials coating and characterization (SiO2, Boron)  MEMS fabrication  MEMS packaging |
| 05/2016 (one week) | MEMS technology and thin films |
|  | University of Science - Vietnam National University HCMC  227 - Nguyen Van Cu street, District 5, Ho Chi Minh city, Vietnam  Website: https://en.hcmus.edu.vn/ |
| 03/2015 (one week) | G-FET on Si(111) fabrication |
|  | WINFAB, Université de Catholique de Louvain  Pl. de l'Université 1, 1348 Ottignies-Louvain-la-Neuve, Belgium  Website: https://uclouvain.be/ |
| 04/2013 (one week) | Nanostructures probed by intense particle beams |
|  | University of Leuven (KU Leuven)  Oude Markt 13, 3000 Leuven, Belgium  Website: https://www.kuleuven.be/ |
| 10/2012 (one week) | UPS measurements of graphitic carbon on Si(111) |
|  | DESY - beamlines (UPS), Synchrotron radiation lab, Hamburg, Germany (https://www.desy.de/ ) |

|  |  |
| --- | --- |
| PERSONAL SKILLS |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Mother tongue(s) | Vietnamese | | | | |
| Other language(s) | UNDERSTANDING | | SPEAKING | | WRITING |
| Listening | Reading | Spoken interaction | Spoken production |  |
| English | very good | very good | very good | very good | very good |
| French | good | good | good | good | good |
| Dutch | beginner | | | | |
| German | beginner | | | | |

|  |  |
| --- | --- |
| Communication skills | Good communication skills gained through my presentation at conference/seminar/workshop, academic discussions |

|  |  |
| --- | --- |
| Organisational / managerial skills | Team work, project management |
| Job-related skills | CVD, MBE, UHV techniques, electron diffraction (LEED and RHEED), XPS, SPM, Electron Microscopy, problem solving, critical thinking, presentation skills |

|  |  |
| --- | --- |
| Computer skills | MS-Office, Matlab, Layout Editor, Visual Basic and other softwares for experimental analyses in the field |

|  |  |
| --- | --- |
| Honors and awards  Publications | 1. Excellent young scientist at SHTP Nanotechnology lab, Saigon Hi-Tech Park, Vietnam (2017-2018).  2. Fellowship of Vietnam government for four-year PhD study in Belgium (2011 - 2015).  3. Research fellowship from the University of Kaiserslautern, Germany (10/2008 - 04/2009).  4. The author of a solution winning the third prize of the contest on scientific technical creation in Ho Chi Minh city, Vietnam (2004).  1. Trung T. Pham, P. Vancsó, M. Szendrő, K. Palotas et al., Higher-indexed Moiré patterns and surface states of MoTe2/graphene heterostructure grown by molecular beam epitaxy, *npj 2D Materials and Applications* **6**, 48 (2022).  2. Lai Xuan Bach, Thi-Bich-Ngoc Dao, Trung T. Pham, Robert Sporken et al., Role of SnO2 nanoparticles for a self-forming barrier layer on a mild steel surface in Hydrochloric acid medium containing piper betle leaf extract, ACS Omega **7**, 38061-38068 (2022).  3. Trung T. Pham, Roshan Castileno, Alexandre Felten, [Robert Sporken](http://www.sciencedirect.com/science/article/pii/S0925963516301182), Study of surface oxidation and recovery of clean MoTe2 films,  *Surfaces and Interfaces* **28**, 101681 (2022).  4. [Duong Chi Trung](https://www.sciencedirect.com/science/article/pii/S0300944021002113?utm_campaign=STMJ_AUTH_SERV_PUBLISHED&utm_medium=email&utm_acid=93692217&SIS_ID=&dgcid=STMJ_AUTH_SERV_PUBLISHED&CMX_ID=&utm_in=DM156283&utm_source=AC_#!), [Trung T. Pham](https://www.sciencedirect.com/science/article/pii/S0300944021002113?utm_campaign=STMJ_AUTH_SERV_PUBLISHED&utm_medium=email&utm_acid=93692217&SIS_ID=&dgcid=STMJ_AUTH_SERV_PUBLISHED&CMX_ID=&utm_in=DM156283&utm_source=AC_#!), [Quoc Binh Phan Minh et al.,](https://www.sciencedirect.com/science/article/pii/S0300944021002113?utm_campaign=STMJ_AUTH_SERV_PUBLISHED&utm_medium=email&utm_acid=93692217&SIS_ID=&dgcid=STMJ_AUTH_SERV_PUBLISHED&CMX_ID=&utm_in=DM156283&utm_source=AC_#!)  The use of Piper Betle leaf extract for forming a barrier layer on steel surface in hydrochloric acid solution, [*Progress in Organic Coatings*](https://www.sciencedirect.com/science/journal/03009440)**158**, 106340 (2021).  5. Thi Tan Pham, Thanh Ngoc Pham, Viorel Chihaia, Quang Anh Vu, Thuat T. Trinh, Trung T. Pham et al., How do the doping concentrations of N and B in graphene modify the water adsorption, *RSC Advances*  **11,** 19560 (2021).  6. Trung T. Pham, Roshan Castileno, Alexandre Felten, [Robert Sporken](http://www.sciencedirect.com/science/article/pii/S0925963516301182), Preparation of single phase 2H-MoTe2 films by molecular beam epitaxy, *Applied Surface Science*  **523,** 146428 (2020).  7. Roshan Castileno, Trung T. Pham, Alexandre Felten, [Robert Sporken](http://www.sciencedirect.com/science/article/pii/S0925963516301182), Substrate temperature dependence of the crystalline quality of MoTe2 for the phase controlled synthesis on graphene/SiC(0001) by Molecular Beam Epitaxy, *Nanotechnology* **31**, 115702 (2020).  8. Le Ngoc, Long; Pham Tan, Thi; Trung T. Pham; Pham Trung, Kien et al., Controllable synthesis of MoS2/graphene low-dimensional nanocomposites and their electrical properties, *Applied Surface Science*  **504,** 144193 (2019).  9. Trung T. Pham, Quyet H. Do, Thanh K. V. Ngo, and Robert Sporken, Direct transfer of the CVD-grown graphene on copper foils on SiO2 substrate under supercritical CO2 assisted-cleaning technique, *Materials Today Communications* **18**, 184-190 (2019).  10. Trung T. Pham, Trung H. Huynh, Quyet H. Do, and Thanh K. V. Ngo, Optimum reproduction and characterization of graphene on copper foils by low pressure chemical vapor deposition, *Materials Chemistry and Physics* **224**, 286-292 (2019).  11. Trung T. Pham, [Robert Sporken](http://www.sciencedirect.com/science/article/pii/S0925963516301182), chapter 7 in handbook of graphene: Growth, Synthesis and Functionalization edited by Edvige celasco and Alexander N. Chaika, Volume **1**, (201–248) © 2019 Scrivener Publishing LLC (book chapter).  12. Trung T. Pham, Trung H. Huynh, Quyet H. Do, and Robert Sporken, Stack of Graphene/Copper Foils/Graphene by Low Pressure Chemical Vapor Deposition as a Thermal Interface Material, *Journal of Electronics Materials* **47**, 7476-7483 (2018).  13. Trung T. Pham, [Robert Sporken](http://www.sciencedirect.com/science/article/pii/S0925963516301182), Three dimensional intercalated porous graphene on Si(111), *Journal of Electronic Materials* **47**, 1575-1582 (2018).  14. Trung T. Pham, Nguyen Dang Nam, [Robert Sporken](http://www.sciencedirect.com/science/article/pii/S0925963516301182), Surface morphology, structural and electronic properties of graphene on Ge(111) via direct deposition of solid-state carbon atoms, *Thin solid films* **639**, 84 - 90 (2017).  15. Trung T. Pham, Robert Sporken, Free-standing graphene intercalated nanosheets on Si(111), *Journal of IKEEE* **21**, 297-308 (2017).  16. Trung T. Pham, Cristiane N. Santos, [Frédéric Joucken](http://www.sciencedirect.com/science/article/pii/S0925963516301182), [Benoît Hackens](http://www.sciencedirect.com/science/article/pii/S0925963516301182), [Jean-Pierre Raskin](http://www.sciencedirect.com/science/article/pii/S0925963516301182), [Robert Sporken](http://www.sciencedirect.com/science/article/pii/S0925963516301182), The role of SiC as a diffusion barrier in the formation of graphene on Si(111), *Diamond and Related Materials* **66**, 141 - 148 (2016).  17. Trung T. Pham, Campos-Delgado, J., Joucken, F., Colomer, J-F., Hackens, B., Raskin, J-P., Santos, C. & Sporken, R., Direct growth of graphene on Si(111), *Journal of Applied Physics* **115**, 223704 (2014).  18. Trung T. Pham, Joucken, F., Campos-Delgado, J., Raskin, J.-P., Hackens, B. & Sporken, R., Direct growth of graphitic carbon on Si(111), *Applied Physics Letters* **102**, 013118 (2013).  19. Trung T. Pham, Hien S. Dinh, Model and characteristic of a resonant tunneling nanostructure*,* *Journal of Technical Education Sciences* **19** (2011).  20. Trung T. Pham, Bayer Daniela, Fabrication and characterization of the ultrafast photoconductive switch, *Journal of Technical Education Sciences* **15** (2010).  21. Son N. Pham, Trung T. Pham, Microstrip line model by finite difference time domain, *Journal of Technical Education Sciences* **15** (2010).  22. Dinh Sy, H., Nguyen, T. L., Le, H. M., Tran Tien, T. Trung T. Pham, Bui An, D., Huynh, T. L. T., Nguyen, L. V. T., Thi, A. T. T., Huynh, H. T., Nguyen, T. T. N., Dinh, V. N., Development of quantum device simulator NEMO-VN1, *IOP - Electronics Journals* **187**, 012088 (2009). |

|  |  |
| --- | --- |
| ADDITIONAL INFORMATION |  |

|  |  |
| --- | --- |
| Articles in preparation  Presentations for conference  Projects  Patents  References | 1. Surface morphology and electronic properties of graphene transferred on Si substrates (revision).  2. CVD growth and structural properties of h-BN films transferred on Si (under preparation).  3. Charge transfer in N-doped 2H-MoTe2 films grown on graphene/SiC(0001) by MBE (under preparation).  1. Trung T. Pham, P. Vancsó, M. Szendrő, K. Palotas, R. Castelino, M. Bouatou, C. Chacon, L. Hendrad, J. Lagoute, R. Sporken, Influence of bias voltage on the observed Moiré patterns of MoTe2/graphene heterostructure grown by molecular beam epitaxy, GDR HOWDI conference 2022, Dourdan, France (9-13/05/2022) ***(Oral presentation)***  2. Trung T. Pham, Roshan Castelino, Peter Vancso, Luc Henrard, Jérome Lagoute and Robert Sporken, Structural and electronic properties of 1H-MoTe2 films grown on graphene by molecular beam epitaxy, Namur Institute of Structured Matter (NISM) Online conference, 20 November (2020). ***(oral presentation)***  3. Trung T. Pham, Roshan Castellino, Alexandre Felten, Robert Sporken, XPS and STM study of 2H-MoTe2 films by molecular beam epitaxy (MBE), JSE conference, Paris, France (21-22 January 2020). ***(oral presentation)***  4. Trung T. Pham, Roshan Castellino, Alexandre Felten, Robert Sporken, High crystalline quality and large area of 2H-MoTe2 films by molecular beam epitaxy (MBE), HeteroNanoCarbon International conference, Benasque - Barcelona, Spain (9-13 December 2019). ***(oral presentation)***  5. Trung T. Pham, Trung H. Huynh, Quyet H. Do, Robert Sporken, Stack of graphene/copper foils/graphene by low-pressure chemical vapor deposition as a new thermal interface material, The 8th BENJAMITRA NETWORK National & International Conference, Bangkok, Thailand (2018). ***(invited talk)***  6. Trung T. Pham, Quyet H. Do, Thang B. Phan, and Nam D. Nguyen, Direct transfer graphene on any arbitrary substrates under supercritical carbon dioxide assisted-cleaning technique, The 5th National Conference Corrosion and metal protection for energy development, Baria-Vung tau city, Vietnam (2017). ***(oral presentation)***  7. Trung T. Pham,Robert Sporken,Some selected results of our study in the growth of graphene on semiconductor substrates in Belgium, Workshop on "25 Year Anniversary of Carbon nanotube discovery and its potential applications", Hochiminh city, Vietnam (12/2016). ***(invited talk)***  8. Trung T. Pham, Santos, N. C., Joucken, F., Campos-Delgado, J., Hackens, B., Raskin, J-P, Sporken, R., Influence of substrate temperature and thickness of SiC buffer layer on the quality of graphene on Si(111), Graphene2015 Conference, Bilbao, Spain (2015). ***(oral presentation)***  9. Trung T. Pham**,** Joucken, F., Campos-Delgado, J., Hackens, B., Raskin, J.-P, Sporken, R., Direct growth of graphene on Si(111), Workshop onMBE-Grown graphene**,** Berlin, Germany (2013). ***(invited talk)***  1. Thin-film devices based on Graphene and Graphene hybrid materials for medical applications (on going) - **Principal investigator**  2. MBE synthesis and characterization of MoTe2 TMDs (2018-2022) - **Principal investigator**  3. CVD graphene and its applications in thermal conduction of electronic devices (SHTP project) (2017-2018) - **Principal investigator**  4. CVD graphene for fabrication of gas sensor administrated by Saigon Hi-Tech Park (SHTP), funded by National Academic Foundation for Science and Technology Development (NAFOSTED) project (2016-2018) - **Principal investigator**  5. Pressure MEMS sensors, Saigon Hi-Tech Park (SHTP) (2017-2018) - **Participant**  6. Graphene on Si(111) - Synchrotron radiation project, DESY (Hamburg synchrotron, Germany) – beamlines (UPS) – Resp.: Robert L. Johnson, 10/2012 (one week) - **Co-investigator**  7. Modeling and simulating Single Electron Transistor (SET) and multi-level quantum dots, administrated by HCMC University of Technology and Education, Vietnam (2010-2011) - **Participant**  8. MOCVD of III-V semiconductor for Light Emitting Diode, Saigon Hi-Tech Park (SHTP) (2017-2018) Vietnam (2006-2007) - **Participant**  9. Simulator NEMO-VN for nanoelectronic devices,the Ministry Level scientific research project (administrated by Ministry of Science and Technology), Vietnam (2005 - 2006) - **Participant**  10. Research and Development of electronic cards for different applications, incubation project administrated by the department of science, technology and environment of Ho Chi Minh city, Vietnam (2002 - 2003) - **Participant**    1. Direct graphene transfer of dry contact (European patent (filed 02/2023) No. PAT2615126EP00)  2. New technology for micro- and nano-electronics (in preparation)  1. Professor Robert SPORKEN (Director of LPME, University of Namur, Belgium)  E-mail: [robert.sporken@unamur.be](javascript:popup_imp('/horde/imp/compose.php',700,650,'to=robert.sporken%40unamur.be');)  2. Professor Luc HENRARD (University of Namur, Belgium)  E-mail: [luc.henrard@unamur.be](javascript:popup_imp('/horde/imp/compose.php',700,650,'to=Frederic%20Joucken%20%3Cfrederic.joucken%40unamur.be%3E');) |