



ACADEMIC TEACHER PROFESSIONAL EXPERIENCE

DOCTORAL SCHOOL OF WROCŁAW UNIVERSITY OF SCIENCE AND TECHNOLOGY

1. Basic information

Name, surname:	Alessandro Surrente
Grade / Title:	Dr hab, prof. uczelni
Scientific discipline	nauki fizyczne/ physical sciences
Faculty:	W11 Wydział Podstawowych Problemów Techniki / Faculty of Fundamental Problems of Technology
Email address:	alessandro.surrente@pwr.edu.pl

2. Publication record

Up to 10 most important papers published over the period of previous 10 years.

No.	Description (authors, publication title, journal / conference, DOI)	Publication year
1.	J. Jasinski, Joshua J.P. Thompson, S. Palai, M. Smiertka, M. Dyksik, T. Taniguchi, K. Watanabe, M. Baranowski, D.K. Maude, A. Surrente , E. Malic, and P. Plochocka. Control of the valley polarization of monolayer WSe ₂ by Dexter-like coupling. <i>2D Materials</i> , 11(2):025007, 2024. doi:10.1088/2053-1583/ad1ae8	2024
2.	S. Wang, M. Dyksik, C. Lampe, M. Gramlich, D. K. Maude, M. Baranowski, A. S. Urban, P. Plochocka, and A. Surrente . Thickness-dependent dark-bright exciton splitting and phonon bottleneck in CsPbBr ₃ -based nanoplatelets revealed via magneto-optical spectroscopy. <i>Nano Letters</i> , 22(17):7011–7019, 2022. doi:10.1021/acs.nanolett.2c01826 .	2022
3.	E. Blundo, P. E. Faria Junior, A. Surrente , G. Pettinari, M. A. Prosnikov, K. Olkowska-Pucko, K. Zollner, T. Wozniak, A. Chaves, T. Kazimierczuk, M. Felici, A. Babinski, M. R. Molas, P. C. M. Christianen, J. Fabian, and A. Polimeni. Strain-induced exciton hybridization in WS ₂ monolayers unveiled by Zeeman-splitting measurements. <i>Physical Review Letters</i> , 129(6):067402, 2022. doi:10.1103/PhysRevLett.129.067402	2022
4.	E. Blundo, A. Surrente , D. Spirito, G. Pettinari, T. Yildirim, C. A. Chavarin, L. Baldassarre, M. Felici, and A. Polimeni. Vibrational properties in highly strained hexagonal boron nitride bubbles. <i>Nano Letters</i> , 22(4):1525–1533, 2022. doi:10.1021/acs.nanolett.1c04197	2022
5.	K. Galkowski, A. Surrente , M. Baranowski, B. Zhao, Z. Yang, A. Sadhanala, S. Mackowski, S.D. Stranks, and P. Plochocka. Excitonic properties of low bandgap lead-tin halide perovskites. <i>ACS Energy Letters</i> , 4(3):615–621, 2019. doi:10.1021/acsenergylett.8b02243	2019
6.	N. Zhang*, A. Surrente* , M. Baranowski, D. K. Maude, P. Gant, A. Castellanos-Gomez, and P. Plochocka. Moire intralayer excitons in a	2018



	MoSe ₂ /MoS ₂ heterostructure. <i>Nano Letters</i> , 18(12):7651–7657, 2018. doi:10.1021/acs.nanolett.8b03266	
7.	A. Surrente , Ł. Kłopotowski, N. Zhang, M. Baranowski, A. Mitioglu, M. V. Ballottin, P. C. M. Christianen, D. Dumcenco, Y.-C. Kung, D. K. Maude, A. Kis, and P. Plochocka. Intervalley scattering of interlayer excitons in a MoS ₂ /MoSe ₂ /MoS ₂ heterostructure in high magnetic field. <i>Nano Letters</i> , 18(6):3994–4000, 2018. doi:10.1021/acs.nanolett.8b01484	2018
8.	A. Surrente , D. Dumcenco, Z. Yang, A. Kuc, Y. Jing, T. Heine, Y.-C. Kung, D. K. Maude, A. Kis, and P. Plochocka. Defect healing and charge transfer mediated valley polarization in MoS ₂ /MoSe ₂ /MoS ₂ trilayer van der waals heterostructures. <i>Nano Letters</i> , 17(7):4130–4136, 2017. doi:10.1021/acs.nanolett.7b00904	2017
9.	A. Surrente , R. Carron, P. Gallo, A. Rudra, B. Dwir, and E. Kapon. Self-formation of hexagonal nanotemplates for growth of pyramidal quantum dots by metalorganic vapor phase epitaxy on patterned substrates. <i>Nano Research</i> , 9(11):3279–3290, 2016. doi:10.1007/s12274-016-1206-7	2016
10.	A. Surrente , A. A. Mitioglu, K. Galkowski, W. Tabis, D. K. Maude, and P. Plochocka. Excitons in atomically thin black phosphorus. <i>Physical Review B</i> , 93(12):121405(R), 2016. doi:10.1103/PhysRevB.93.121405	2016

3. Projects and grants

List of the most important 5 projects/grants with basic description including: title, source(s) of funding, name of the call, role in the project (e.g., principal investigator).

1.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Strain engineering of layered perovskites: shaping excitonic properties in a soft material
	Sources of funding	NCN
	Name of the call	Sonata Bis 13
	Implementation period	2024-2029
2.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Electronic properties and polaronic effects in lead halide perovskite nanoplatelets
	Sources of funding	NCN
	Name of the call	Sonata 16
	Implementation period	2021-2024
3.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Strain Engineering of Light-Emitting Nanodomes
	Sources of funding	European Union's Horizon 2020 research and innovation programme



	Name of the call	Marie Skłodowska Curie Individual Fellowship 2018
	Implementation period	2019-2020
4.	Role in the project (e.g., principal investigator, work package leader, etc.)	
	Project title	
	Sources of funding	
	Name of the call	
	Implementation period	
5.	Role in the project (e.g., principal investigator, work package leader, etc.)	
	Project title	
	Sources of funding	
	Name of the call	
	Implementation period	

4. International experience

Brief description of international cooperation and experience (e.g., research stays, cooperation with foreign entities, coordination or participation in international projects or programmes, keynote speeches and presentations delivered at renowned international conferences, visiting professor stays, invited lectures).

No.	Description	Year(s)
1.	Scholarship for Visiting Professorship at University of Toulouse (two months), Toulouse, France, funded by University of Toulouse	2023
2.	Scholarship for Visiting Professorship at the National High Magnetic Field Laboratory (two months), CNRS, Toulouse, France, funded by Nano X (Toulouse Excellence Laboratory, supported by French National Research Agency)	2021-2022
3.	Multiple visits at High Magnetic Field Laboratory, Radboud University, Nijmegen, the Netherlands	2016-2019
4.	Spin polarization dynamics in WSe ₂ monolayer and in WSe ₂ /BAPbI ₄ heterostructure. <i>5th Multiscale Phenomena in Condensed Matter Physics (Multis2024)</i> , Krakow, Poland, September 2024 (oral, invited talk)	2024
5	A. Surrente . Magnetically brightened dark excitons in two-dimensional metal halide perovskites. <i>56th Zakopane School of Physics</i> , Zakopane, Poland, May 2023 (oral, invited talk)	2023
6	A. Surrente . Magnetically brightened dark excitons in two-dimensional metal halide perovskites. <i>18th Advanced Properties and Processes in Optoelectronic Materials and Systems (APROPOS18)</i> , Vilnius, Lithuania, October 2022 (oral, invited talk)	2022
7	5. A. Surrente . Magneto-optics of excitons in perovskites. <i>23rd International Conference on High Magnetic Fields in Semiconductor Physics</i> , Toulouse, France, July 2018 (oral, invited talk)	2018



8	A. Surrente. Excitons in two-dimensional semiconductors: how to make them bright and how to make them flip, Catholic University of Leuven, Leuven, Belgium, October 2024 (invited seminar)	2024
9	A. Surrente. Formation of microdomes in 2D materials and excitons in metal halide perovskites, University of Regensburg, Regensburg, Germany, October 2021 (invited seminar)	2021
10	A. Surrente. Optical spectroscopy of low dimensional semiconductors: III-V QDs, TMDs, metal halide perovskites, Institut de Nanotechnologie de Lyon, INSA, Lyon, France, May 2020 (invited seminar)	2020
11	A. Surrente. Excitons in emerging semiconductors: van der Waals heterostructures and metal halide perovskites, Centre de Recherche sur l'Hétéroépitaxie et ses Applications, CNRS, Valbonne, France, December 2019 (invited seminar)	2019
12	A. Surrente. Optical spectroscopy of low dimensional semiconductors: the case of III-V QDs and TMDs, Wrocław University of Science and Technology, Wrocław, Poland, May 2019 (invited seminar)	2019
13	A. Surrente. Defect healing and interlayer exciton in a CVD grown MoS ₂ /MoSe ₂ /MoS ₂ heterostructure, University of Regensburg, Regensburg, Germany, December 2018 (invited seminar)	2018
14	A. Surrente. Excitons in emerging semiconductors: van der Waals heterostructures and metal halide perovskites, Chalmers University of Technology, Gothenburg, Sweden, November 2018 (invited seminar)	2018
15	A. Surrente. Excitons in emerging semiconductors: van der Waals heterostructures and metal halide perovskites, Laboratoire de Physique des Solides, Orsay, France, November 2018 (invited seminar)	2018

5. Experience in teaching doctoral students

Brief description of experience in teaching doctoral students (e.g., courses in doctoral schools and PhD studies, summer/winter schools for doctoral students, tutorials, trainings, etc.).

No.	Description	Year(s)
1.	Recent research trends in physical sciences	2023-2024
2.		
3.		

6. List of supervised doctoral students

List of all supervised doctoral students that defended the PhD including: name of the student, dissertation title, year of awarding PhD.

No.	Name, surname	Dissertation title	Year of awarding PhD
1.			
2.			

3.			
----	--	--	--

7. Prizes and awards

The most important national and international prizes and awards related to research, development and teaching activities.

No.	Description	Year
1.	IOP Outstanding Referee Award	2023
2.	University President's Award in recognition of outstanding contribution to the activities of the University	2022
3.	Industrial Union, Turin, Best Physics Engineering graduate and Optime Club membership	2007

8. Other significant achievements

Information on other significant achievements related to research, development and teaching activities.

Guest Editor for Focus Collection on [Horizon 2025: Development Trends and Future Challenges in Nanoscience](#), in [Nano Futures](#), published by IOP

Evaluator of Research projects for ANR (France, 2018)

Evaluator of Research projects for Horizon Europe Marie Skłodowska-Curie 2024

2024: Co-organizer of [11th Flatlands beyond Graphene 2024](#) Conference, Wrocław, Poland, September 2024

2023: Co-organizer of [2Ds Go Hybrid: Properties and Applications of Systems with Mixed Dimensionalities](#) Symposium at MRS Fall Meeting, Boston, USA, December 2023

2021: Member of organization committee of the workshop [2Day](#), hosted by the Physics Department of Sapienza University of Rome, Rome, Italy.

2019, Sapienza University of Rome: Invited article on the 2019 issue of outreach journal [Scuola e Ricerca](#) (in Italian)

2016 – 2018, LNCMI, CNRS: Deputy delegate of PhD students and postdocs in the laboratory council

2015 – 2018, LNCMI, CNRS: [Science Festival](#) (in French). Open days of all the laboratories of the region. I held a small workshop with simple experiments to introduce lasers and optics to general public. [Description](#) of the activities at the National High Magnetic Field Laboratory (acronym in French: LNCMI).

2011, EPFL: [Open days](#). Introduction to general public of emodynamic simulations: visualization of deformation of blood vessels upon blood flow.