

Biel Martínez Díaz

Birthday: Barcelona, 10 February 1995



(+34) 606 66 86 09



bmartidi7@alumnes.ub.edu



C/ Monges 4, 2-3, 08461

Sant Esteve de Palautordera (Spain)



ABOUT ME

Student of the two-year master in Theoretical Chemistry and Computational Modelling of the University of Barcelona with special interest in the fundamentals of quantum mechanics and their applicability in solving real-life problems. Enthusiast of mountains, nature, and sports.



DISSEMINATION

● CMSL GROUP MEETING

Barcelona, October 2018

Oral contribution with a speech entitled "Electron transmission in graphene nanoribbons" in a Computational Materials Science Laboratory group meeting.

● EUROPEAN RESEARCHERS' NIGHT

Perugia, September 2018

I organized an activity to disseminate computational chemistry to a child audience in a Marie Skłodowska Curie action under the EU Framework Programme for Research and Innovation Horizon 2020.

● THEORETICAL AND COMPUTATIONAL CHEMISTRY INSTITUTE (IQC) CONGRESS

Barcelona, May 2018

Poster contribution, entitled "To what extent do chemical descriptors behave as such? Study of electronic chemical descriptors for hcp transition metals".

● YOUNG RESEARCHERS ON THEORETICAL AND MOLECULAR PHYSICS CONGRESS (J2IFAM)

Barcelona, April 2018

Oral contribution with a speech entitled "Compactness and d-band filling effect on chemical descriptors for transition metals".



ACADEMIC RECORD

2017-Now **Master in Theoretical and Computational Chemistry** **Grade: 9.5**
University of Barcelona, Barcelona

January 2019 **Luchon Tutorial on Theoretical Chemistry of the Paul Luchon**
Luchon Sabatier University, Toulouse.

May 2018 **CECAM school on quantum and mixed quantum classical dynamics in photochemistry.**
Zaragoza

May 2018 **CECAM school on theoretical solid state chemistry: theory, modelling and simulation.**
Zaragoza

April 2018 **CECAM school on kinetics and dynamics of chemical reactions.**
Zaragoza

2013-2017 **Degree in Chemistry** **Grade: 8.8**
University of Barcelona, Barcelona



ADDITIONAL ACADEMIC RECORD

2016-2017 **English Course B2.2 level**
Escola d'Idiomes Moderns (EIM), Barcelona

2016-2017 **English Course B2.1 level**
Escola d'Idiomes Moderns (EIM), Barcelona

Summer 2016

Summer Internship
University of Barcelona, Barcelona

Under the supervision of the actual research vice-dean of the UB Dr. Fermín Huarte, I worked on the software developing for nuclear wave packet propagations.

Introductory and Advanced Courses on Computational Chemistry
University of Barcelona, Barcelona



WORKING EXPERIENCE

2018-Now **RESEARCHER**

Bosch i Gimpera Foundation, Barcelona

This third party of the University of Barcelona and via EU funding, hired me in July 2018 for the collaboration in a project related with the study of sub-surface C atoms activity.

Summer 2018 **RESEARCHER**

DIPC, San Sebastián

I was selected for the realization of a project entitled "Wave packet propagation on graphene nanoribbons" under the supervision of Dr. Thomas Frederiksen during June and July 2018, in one of the competitive Internships offered by the Donostia International Physics Center (DIPC).

2017-2018 **RESEARCHER**

IQTC-UB, Barcelona

I obtained one of the two funding opportunities that the IQTC addresses each year to those master students from the University of Barcelona that want to focus their research career in the computational chemistry.

Summer 2013 and 2015 **HORSE-RIDING SUMMER CAMP MONITOR**
A.E. Can Marc, Sant Esteve de Palautordera



GRANTS AND PRIZES

2017 **Extraordinary award in Chemistry degree**

Award granted to the best student of the promotion. In my case, it was conceded to me for being the best student of the Chemistry degree that finished it in 2017.

2013-2018 **Grant of the Spanish Government for undergraduate studies**

From my first year of degree, the "Beca general para estudios universitarios" grant was conceded to me year-to-year.

2013-2017 **11 Honor distinctions in the degree**

During the degree in Chemistry, I obtained honor distinctions, an award conceded to a maximum of the 5% of the students, in 11 subjects:

Mathematics I, Physics I, Applied Chemistry II, Physics II, Chemical Engineering, Basic Laboratory of Analytical Chemistry, Instrumental Analysis, Physical Chemistry III, Laboratory of Physical Chemistry, Separation Techniques, Final degree's project.

2016-2017 **Undergraduate research grant**

During my last year of the degree, I obtained the "Beca de colaboración" grant from the Spanish ministry to work with Dr. Fermín Huarte and Dr. J. M. Lucas in the experimental and computational study of ion-molecule reactions.



PUBLICATIONS

The results of my final degree's project contributed in the elaboration of a scientific paper that was published in June 2018 in a top-level international scientific peer-reviewed journal of the field:

Vega, L., Martínez, B., Viñes, F. & Illas, F. Robustness of surface activity electronic structure-based descriptors of transition metals. *Phys. Chem. Chem. Phys.* **20**, 20548–20554 (2018).



SKILLS

Languages:

Catalan, Spanish, English (C1, B2.2 certified).

Programming Languages:

Python	<div style="width: 80%;"></div>
Bash	<div style="width: 60%;"></div>
Fortran	<div style="width: 40%;"></div>

Experience with supercomputers:

portal (UB), CCC (UAM), herla (UNIPG).

Experience with computational codes:

VASP	<div style="width: 80%;"></div>
GAMESS	<div style="width: 60%;"></div>
Gaussian	<div style="width: 40%;"></div>
Orca	<div style="width: 20%;"></div>
Crystal	<div style="width: 10%;"></div>
VESTA	<div style="width: 80%;"></div>