

CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	David		
Family name	Díaz Díaz		
Gender	Male	Birth date	10/11/1974
ID number	43365938J		
e-mail	ddiazdiaz@ull.edu.es	http://ddiazdiaz.webs.ull.es/	
Open Researcher and Contributor ID (ORCID)	0000-0002-0557-3364		

A.1. Current position

Position	Distinguished Researcher (Beatriz Galindo, Senior)		
Initial date	07/01/2020		
Institution	University of La Laguna		
Department/Center	Department of Organic Chemistry/IUBO-ULL		
Country	Spain	Teleph. number	922318610
Key words	Gels, hydrogels, organogels, polymers, organic synthesis, catalysis, photoredox catalysis, organic-inorganic hybrid materials, multifunctional materials, adhesives, coatings, metal nanoparticles, drug delivery, supramolecular chemistry, tissue engineering, self-assembly, self-healing, dynamic covalent chemistry, energy, environmental remediation, formulation science.		

A.2. Previous positions

Period	Position/Institution/Country
01/10/2018-present	Privatdozent/University of Regensburg/Germany
01/10/2013-30/09/2018	Assoc. Professor W2/University of Regensburg/Germany
01/01/2010-31/12/2011	AvH Experienced Researcher/University of Regensburg/Germany
08/10/2009-present	Tenured Scientist/CSIC/Spain (currently on voluntary leave)
01/12/2006-31/12/2008	Sr. Scientist/The Dow Chemical Company/Switzerland
01/01/2006-01/01/2007	Ramón y Cajal Researcher/UAM/Spain
15/07/2002-14/10/2005	Research Associate/The Scripps Research Institute/USA

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Chemistry	Universidad de La Laguna (ULL)/Spain	2002
Licensed in Chemistry	Universidad de La Laguna (ULL)/Spain	1997

Part B. CV SUMMARY

David Díaz Díaz studied Chemical Sciences and received his PhD in Chemistry from ULL (Advisor: Prof. Víctor Martín). His PhD thesis focused on synthetic methodologies using transition metal complexes. In 2002, he joined Professor M. G. Finn's research group as postdoctoral researcher at The Scripps Research Institute (TSRI) in San Diego (CA, USA) during 4 years. There, he worked closely with Nobel Laureate Prof. K. B. Sharpless on the first applications of click chemistry to materials science. His research focused on amidine chemistry, bioorthogonal chemistry, functional polymers, and soft materials. Since 2006, he has held various positions in academia and industry (Ramón y Cajal, UAM; Sr. Chemist, Dow Chemical; Alexander von Humboldt Experienced Researcher, Universität Regensburg -section A.2.-). In 2010, he establishing his independent group at Univ. Regensburg (Germany), and in 2013 he was awarded the Heisenberg Professorship from the DFG and became Assoc. Prof. at the Faculty of Chemistry & Pharmacy of Universität Regensburg. Among other editorial activities, he is the *Editor-in-Chief* of *Gels* (est. 2014), Review Editor of *Frontiers in Chemistry*



(est. 2022), Full Member of the Editorial Board of ScienceOpen (est. 2012), and Section Editor (Chemistry) of *The All Results Journals: Chem* (ISSN 2172-4563) (est. 2010). In 2017, he received Honorary Adjunct Professorships from the Universities of Jiangsu (China Society for Advanced Materials) and Nigeria (African Nanoscience-Nanotechnology Initiative), Honorary Membership of the Argentine Society of Organic Chemistry, and the status of permanent member (*venia legendi*) of the Faculty of Chemistry & Pharmacy of Universität Regensburg. In 2018 he became Prof. Privatdozent at Univ. Regensburg, and in 2020 he was appointed as Distinguished Researcher (Beatriz Galindo, Senior) at ULL, where he established his group AFM-NANO. In his role as evaluator, he is habitual reviewer for numerous JCR journals, member of evaluation panels for international agencies (e.g. ANEP (Spain), DFG (Germany), ERC, FWO (Belgium), ARF (Austria), MCT (Romania), FONDECYT (Chile), FONCyT (Argentina), ACS PRF (USA)), examiner of numerous national and international PhD and MSc theses, scientific coordinator and evaluator of the International PhD program and SynCat MSc Advanced Synthesis and Catalysis at Univ. Regensburg, and member of the executive committee of the Antonio González University Institute of Bio-Organic (Tenerife). He is member of several scientific societies (e.g. ACS, RSC, RSEQ, GDCh, SSB). Through his career, he has participated in more than 20 funded projects including various in collaboration with industries. He has 3 periods of 6 years on research work recognized, and has communicated his results through 220 articles (> 75% Q1 and as corresponding author; h-index = 48 (Google Scholar)) that has accumulated more than 8700 citations. In addition, he has published several outreach contributions (14), industrial reports (5), patents (3) and book chapters (7). He has delivered more than 50 invited conferences in national and international centers, and participated in >70 congresses. He has been the director of 12 PhD theses (including 5 currently in progress), 12 MSc theses and 17 BSc theses. Dr. Díaz has built a network of very productive collaborations with major scientists worldwide, including M. G. Finn, Georgia Tech (USA); J. Johnson, MIT (USA); K. B. Sharpless, TSRI (USA); N. Kimizuka, Kyushu Univ. (Japan); M. Waser, JKU Linz (Austria); and Oliver Reiser, UR (Germany), among others. Moreover, his leadership has been enhanced by directing the start-up of the Nanotech-Intech center (Tenerife) to promote research in the areas of nanomaterials and sustainability. His research focuses on advanced materials for biomedical, catalytic, coating and energy applications.

Awards & distinctions: 1st Degree Award in Chemistry 1992–1997, ULL (1997); Outstanding Award in Chemical Sciences, ULL, 1997; National Award for Excellence in Academic Performance 1996–1997; Young Researchers Award, Canarias, 2002; Best Doctoral Thesis Award, Chemistry Faculty, ULL, 2003; PhD Award, Experimental & Technical Sciences, ULL, 2003; Teresa Pinillos Scientific Outreach Award, AITRI, 2005; Young Researchers Award, Autonomic Government, Canarias, 2005; Young Canarias 2007 Award; European Young Chemist Award Finalist, Italy, 2008; Dow Chemical Company (Switzerland): Performance Awards, 2007-2009; Alexander von Humboldt Award, Experienced Researchers, Germany, 2010; Heisenberg Professorship, DFG, Germany, 2013; Young Investigator Award, PNG, Japan, 2014; Honorary Adjunct Prof., Jiangsu Univ., China, 2017; Accreditation as Assoc. Prof. by ANECA, Spain, 2017; Honorary Member, Argentine Society of Research in Organic Chemistry, Argentina, 2017; Privatdozent, Univ. Regensburg, 2018; Accreditation as Full Prof., ANECA, 2021; Research Excellence Award (RSEQ), Spain, 2021; IAAM Scientist Award, Sweden 2022; I3 certification by MICINN, Spain (2022).

Part C. RELEVANT MERITS

C.1. Publications

1. Bonardd, S.; Nandi, M.; Hernández García, J. I.; Maiti, B.; Abramov, A.; Díaz, D. D. Self-healing polymeric soft actuators. *Chem. Rev.* **2022**, in press (DOI: 10.1021/acs.chemrev.2c00418).
2. Ramírez, O.; Bonardd, S.; Saldías, C.; Zambrano, Y.; Díaz, D. D.; Leiva, A. CuAu bimetallic plasmonic-enhanced catalysts supported on alginate biohydrogels. *Carbohydr. Polym.* **2022**, 297, 120021 (DOI: 10.1016/j.carbpol.2022.120021).
3. Bonardd, S.; Maiti, B.; Grijalvo, S.; Rodríguez, J.; Enshaei, H.; Kortaberria, G.; Alemán, C.; Díaz, D. D. Biomass-derived isosorbide-based thermoresponsive hydrogel for drug



- delivery. *Soft Matter* **2022**, 18, 4963-4972 (DOI: 10.1039/D2SM00623E).
4. Abranov, A.; Maiti, B.; Keridou, I.; Puiggali, J.; Reiser, O.; Díaz, D. D. An air-tolerant polymer gel-immobilized iridium photocatalyst with pumping recyclability properties. *Chem. Commun.* **2021**, 57, 7762-7765 (DOI: 10.1039/D1CC03020E).
 5. Abramov, M.; Maiti, B.; Keridou, I.; Puiggali, J.; Reiser, O.; Díaz, D. D. A pH-triggered polymer degradation or drug delivery system by light-mediated cis/trans isomerization of O-hydroxy cinnamates. *Macromol. Rapid Commun.* **2021**, 42, 2100213 (DOI: 10.1002/marc.202100213).
 6. Maiti, B.; Abramov, A.; Franco, L.; Puiggali, J.; Enshaei, H.; Aleman, C.; Díaz, D. D. Thermoresponsive shape-memory hydrogel actuators made by photo-triggered click chemistry. *Adv. Funct. Mater.* **2020**, 30, 2001683 (DOI: 10.1002/adfm.202001683).
 7. Maiti, B.; Abramov, A.; Pérez-Ruiz, R.; Díaz, D. D. The prospect of photochemical reactions in confined gel media. *Acc. Chem. Res.* **2019**, 52, 1865-1876 (DOI: 10.1021/acs.accounts.9b00097).
 8. Armelin, E.; Whelan, R.; Martínez-Triana, Y.; Alemán, C.; Finn, M. G.; Díaz, D. D. Protective coatings for aluminum alloy based on hyperbranched 1,4-polytriazoles. *ACS Appl. Mater. Interfaces* **2017**, 9, 4231-4243 (DOI: 10.1021/acsami.6b14174).
 9. Zhou, H.; Schön, E.-M.; Wang, M.; Glassman, M.; Liu, J.; Zhong, M.; Díaz, D. D.; Olsen, B. D.; Johnson, J. A. Crossover experiments applied to network formation reactions: Improved strategies for counting elastically inactive molecular defects in PEG gels and hyperbranched polymers. *J. Am. Chem. Soc.* **2014**, 136, 9464-9470 (DOI: 10.1021/ja5042385).
 10. Mallick, A.; Schön, E.-M.; Panda, T.; Sreenivas, K.; Díaz, D. D.; Banerjee, R. Fine-tuning the balance between crystallization and gelation and enhancement of CO₂ uptake on functionalized calcium based MOFs and metallogels. *J. Mater. Chem.* **2012**, 22, 14951-14963 (DOI: 10.1039/C2JM30866E).

C.2. Congress

1. International Conference on Nanomaterials & Nanotechnology. Stockholm, Sweden, 28/08/2022-31/08/2022. Díaz, D. D. Participation: Invited IAAM Award Lecture.
2. XXIV Semana Científica Antonio González "Antonio González". Spain, Tenerife, 04/10/2022-07/10/2022. Díaz, D. D. Participation: Organizing Committee.
3. PNG 2022 Conference. Italy, Roma, 12/06/2022-16/06/2022. Díaz, D. D. Participation: Invited Keynote Speaker.
4. Symposium: The power of chemical synthesis and characterization. Tenerife, Spain, 27/04/2022. Díaz, D. D. Participation: Organizer.
5. RSEQ Symposium 2021. Spain, 27/09/2021-30/09/2021. Díaz, D. D. Participation: Invited Lecture.
6. Milan Polymer Days 2020. Italy, Milan, 11/03/2020-13/03/2020. Díaz, D. D. Participation: Invited Keynote Speaker.
7. XXXVIII Reunión Bienal de Química Orgánica-RSEQ. Spain, Tenerife, 2020 postponed to 2024. Díaz, D. D. Participation: Organizing Committee.
8. ACS 70th Southeastern Regional Meeting. Symposium: Organic chemistry tools for synthesis, biomedicine, and materials science. USA, Augusta, 31/10/2018-03/11/2018. Díaz, D. D. Participation: Organizing Committee and Oral Presentation.
9. 3rd African Conference on Nanotechnology. Nsukka, Nigeria, 15/08/2018-27/08/2018. Díaz, D. D. Participation: Invited Plenary Lecture.
10. XXI National Symposium on Organic Chemistry. Argentina, San Luis, 08/11/2017-11/11/2017. Díaz, D. D. Participation: Invited Plenary Lecture.

C.3. Research projects

1. Redes orgánicas covalentes micro-mesoporosas ajustables para la reducción de CO₂. Spanish Ministry of Science and Innovation (MICINN), Spain, 01/12/2022-31/01/2024, 184.000 €, Ref. TED2021-132847B-I00. Principal Investigator.
2. Development of gel-based formulations for visible light redox catalysis based on triplet-triplet annihilation. Spanish Ministry of Science and Innovation (MICINN), Spain, 01/06/2020-31/05/2023, 134.000 €, Ref. PID2019-105391GB-C21. Principal Investigator.



3. Development of polymer-based hydrogels via click chemistry, BMBF Federal Ministry of Education and Research (BMBF), Germany, 01/08/2017-31/12/2020, 311.146 €. Ref. 03ET6091C. Principal Investigator.
4. Understanding the influence of wet chemical treatment on electro-optical characteristics of epitaxially grown (III-V) compound semiconductor layers. Osram Opto Semiconductors GmbH, Germany, 01/2017-01/2020, 210.000 €. Principal Investigator.
5. Gel-based materials as nanoreactors for catalytic processes. German Research Foundation (DFG), Germany, 10/2013-10/2018, 570.800 €, Ref. DFG1748/3-(1-3). Principal Investigator.
6. Dendrimer-based nanoaggregates for light harvesting, electron delivery and hydrogen production. A potential integrated nanodevice for artificial photosynthesis. Comisión Nacional de Ciencias y Tecnología (Conicyt), Chile, 01/11/2016-31/10/2019, 65.000 €. Ref. 11160707. Research Team Member.
7. Preparation of new acid-based metal organic frameworks and related metallogels for water adsorption and controlled release. German Academic Service (DAAD), Germany, 01/2015-01/2018, 44.700 €. Principal Investigator.
8. Development of new gel-based materials for catalysis and biomedicine. University of Regensburg, Germany, 01/10/2013-31/09/2018, 50.000 €. Principal Investigator.
9. Sustainable functional gels with high thermo-resistance and mechanical strength enabled by 'spring-loaded' reactions. Alexander von Humboldt Foundation, Germany, 01/01/2010-30/06/2011, 124.100 € (including salary). Ref. 3.3-1133363-ESP-HFST-E. Principal Investigator.
10. Development of a sustainable synthetic methodology for the manufacture of highly resistant functional gels with biomedical, catalytic and environmental applications. The Spanish National Research Council (CSIC), Spain, Intramural Project, 01/01/2010-31/12/2010, 30.000 €. Ref. 2009801059. Principal Investigator.

C.4. Contracts, technological or transfer merits

Contracts:

1. María Zambrano contract, ULL: Dr. Yanina Moglie, 2023-2024.
2. Juan de la Cierva-Formación contract, ULL: Dr. Sebastián Bonardd, 2021-2022.
3. FPI predoctoral contract, ULL: Paola del Carmen Domínguez, 2021-2024.
4. Technician contract, ULL: Nayara Mejías Pérez, 2021-2022.
5. Juan de la Cierva-Formación contract, CSIC: Dr. María José Trujillo Rodríguez, 2020-2021. Note: Dr. Trujillo obtained the contract while Dr. Díaz was at CSIC, but she was not allowed to move with his group to the ULL (Beatriz Galindo contract of Dr. Díaz).
6. Research Associate contract, Universität Regensburg: Dr. Binoy Maiti, 2017-2020.

Agreements:

1. Project Advisor Agreement: Arquimea Research Center (Nanotec-Intech), Tenerife, Spain, 25/08/2022-present.
2. Project Advisor Agreement: Osram Opto Semiconductors GmbH, Regensburg, Germany, 01/2017-01/2020.

Patents:

1. Díaz, D. D.; Bonardd, S. P2022231097. Película porosa de quitosano, procedimiento para su fabricación y uso. University of La Laguna. Spain. 22/12/2022.
2. Gutiérrez-Serpa, A.; Napolitano, P.; Taima-Mancera, I.; Ayala, J.H.; Pino, V.; Díaz, D. D.; Pasán, J. P202131195. Recipiente de vidrio recubierto interiormente con una red metal-orgánica. University of La Laguna. Spain. 23/12/2021.
3. Díaz, D. D. P201930672. Uso de una composición acuosa como adhesivo. The Spanish National Research Council. España. 07/19/2019.
4. Díaz, D. D.; Fokin, V. V.; Finn, MG. WO 2007/027493 A2. Stabilization of organogels and hydrogels by copper(I)-catalyzed azide-alkyne [3+2] cycloaddition. The Scripps Research Institute. USA. 08/03/2007.