



Curriculum Vitae

Joana Ferreira Leal

Joana Ferreira Leal. Completed the PhD in Chemistry in 2017/03/03 by University of Aveiro (PhD grant awarded by FCT - 4th position in the national ranking of the area). Concluded the Master in Analytical chemistry and Quality in 2012/07/26 by University of Aveiro and Degree in Biochemistry in 2010/07/28 by University of Aveiro. She is Postdoc in Centro de Ciências do Mar (CCMAR). Published 7 articles in scientific international journals as first author. Organized 3 events and participated in 2 events. Co-supervised 2 works of course completion of LSc/BSc. Has received 1 award by IHSS. Works in the area(s) of Exact Sciences with emphasis on Chemical Sciences, Analytical Chemistry, Organic Chemistry and Environmental Chemistry. Her main research interests are solar photodegradation and photocatalysis, water remediation, pollutants removal from aqueous effluents, antibiotics, organic matter (humic substances), interaction of pollutants with water constituents, aquaculture, waste water treatment plants (WWTPs), real-scale applications. In her professional activities interacted with 14 collaborators co-authorship of scientific papers. Her specific technical skills are HPLC (High Pressure Liquid Chromatography); atomic absorption by graphite and flame; inductively coupled plasma (ICP) with concentric, ultrasonic or hydride generator nebulizer; continuous segmented flow; UV-Vis spectroscopy (liquids and solids); molecular fluorescence; infrared spectroscopy (FTIR); scanning electron microscopy (SEM); determination of carbon in liquid and solid samples and determination of oxidability in acid medium. Pre-concentration techniques: solid-phase extraction (SPE) and liquid-liquid dispersive micro extraction (DLLME). Biological/biochemistry techniques: Antibiograms and ELISA (Enzyme-Linked Immunosorbent Assay). Works with Microsoft Office (domain in Excel, Word and Power Point); Origin8; GraphPad; IBM SPSS Statistics 24, Matlab and ChemBioDraw (computer skills) and is proactive, competent, responsible and organized (personal skills).

Identification

Personal identification

Full name

Joana Ferreira Leal

Quoting name

Leal, Joana F.

Gender

Female

Author identifiers

Ciência ID

7816-76B3-F5F5

ORCID iD

0000-0002-0336-346X

Scopus Author Id

35096256100

Websites

<https://www.ccmr.ualg.pt/users/joana-leal> (Professional)

Knowledge fields

Exact Sciences - Chemical Sciences
 Exact Sciences - Chemical Sciences - Analytical Chemistry
 Exact Sciences - Chemical Sciences - Physical Chemistry
 Exact Sciences - Chemical Sciences - Organic Chemistry
 Natural sciences - Earth and Environmental Sciences - Oceanography
 Natural sciences - Biological Sciences - Biochemistry

Languages

Language	Speaking	Reading	Writing	Listening	Peer-review
Portuguese (Mother tongue)					
English	Intermediate (B1)	Upper intermediate (B2)	Upper intermediate (B2)	Upper intermediate (B2)	Upper intermediate (B2)
German	Elementary (A2)	Elementary (A2)	Elementary (A2)	Elementary (A2)	Elementary (A2)

Education

	Degree	Classification
2018/11/12 - 2018/11/12 Concluded	NP EN ISO/IEC 17025: 2018 - General competence requirements for testing and calibration laboratories (Diploma de especialização) Águas do Algarve S.A., Portugal	
2013/02/01 - 2017/03/03 Concluded	Chemistry (Doutoramento) Major in Analytical and environmental chemistry Universidade de Aveiro Departamento de Química, Portugal <i>"Photo-degradation of contaminants as a way of remediation of aquaculture's waters"</i> (THESIS/DISSERTATION)	Approved with distinction
2015/09/26 - 2016/05/28 Concluded	German free course, level A2 (Curso médio) Universidade de Aveiro Departamento de Línguas e Culturas, Portugal	18 (0-20)

2015/12/11 - 2016/03/11 Concluded	Hazard Analysis and Critical Control Point - HACCP (Diploma de especialização)	10 (0-10)
	Intedya, International Dynamic Advisors, Portugal	
2015/02/23 - 2015/06/04 Concluded	German free course, level A1 (Curso médio)	17 (0-20)
	Universidade de Aveiro Departamento de Línguas e Culturas, Portugal	
2013/02/25 - 2013/06/07 Concluded	Academic English Free Course (Curso médio)	16 (0-20)
	Universidade de Aveiro Departamento de Línguas e Culturas, Portugal	
2010/09/03 - 2012/07/26 Concluded	Analytical chemistry and quality (Mestrado)	17 (0-20)
	Universidade de Aveiro Departamento de Química, Portugal <i>"Photodegradation of flame retardant BDE-209"</i> (<i>THESIS/DISSERTATION</i>)	
2012/04/27 - 2012/04/30 Concluded	Internal Audits to Quality Management Systems NP EN ISO 9001: 2008. (Diploma de especialização)	10 (0-10)
	SN Formação, Portugal	
2007/09/17 - 2010/07/28 Concluded	Biochemistry (Licenciatura)	15 (0-20)
	Universidade de Aveiro Departamento de Química, Portugal <i>"Photodegradation studies of the flame retardant BDE- 209"</i> (<i>THESIS/DISSERTATION</i>)	
2008/12/01 - 2009/11/30 Concluded	Analysis, Speciation and behavior of pollutants in the environment. (Diploma de especialização)	
	Universidade de Aveiro Departamento de Química, Portugal	

Affiliation

Science

2019/01/02 - Current	Postdoc (Research) Centro de Ciências do Mar, Portugal
----------------------	---

Other Careers

2017/07/17 - 2018/12/18 Técnico Superior (Técnico Superior)
Águas do Algarve S.A., Portugal

Others

2007/09/17 - 2017/03/03 Student
Universidade de Aveiro Departamento de Química, Portugal

Outputs

Publications

- | | | |
|---------------------|---|---|
| Conference abstract | 1 | Leal, Joana F.; Esteves, V.I.; Santos, E.B.H.. 2019. "Is ozonation an efficient method for the treatment of marine waters?". Paper presented in <i>International Meeting on Marine Research 2018, Peniche, Portugal</i> . |
| | 2 | Leal, Joana F.; Henriques, I.S.; Correia, A.; Santos, E.B.H.; Esteves, V.I.. 2016. "Do by-products of oxytetracycline retain its antibacterial activity after irradiation under sunlight?". Paper presented in <i>Encontro Luso-Galego de Química, Bragança, Portugal</i> . |
| | 3 | Fernandes, I.J.; Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2016. "Foto-degradação do Florfenicol em Sistemas Aquáticos (Photodegradation of Florfenicol in Aquatic Systems)". Paper presented in <i>Encontro Luso-Galego de Química, Bragança, Portugal</i> . |
| | 4 | Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2015. "Uso da formalina em piscicultura intensiva (Use of formalin in intensive fish farming)". Paper presented in <i>XV Congreso Nacional / I Congreso Ibérico de Acuicultura, Huelva, Spain</i> . |
| | 5 | Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2014. "Foto-degradação de contaminantes orgânicos em sistemas aquáticos: estudos cinéticos e interações ambientais (Photo-degradation of organic contaminants in aquatic systems: kinetic studies and environmental interactions)". Paper presented in <i>Encontro Luso-Galego de Química, Porto, Portugal</i> . |
| | 6 | Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2013. "Efeito de filtro das Substâncias Húmicas aquáticas: qual o seu papel na foto-degradação solar de contaminantes orgânicos? (Filter effect of aquatic Humic Substances: what is its role in photo-degradation of organic contaminants?)". Paper presented in <i>10ª Conferência Nacional do Ambiente / XII Congresso Nacional de Engenharia do Ambiente, Aveiro, Portugal</i> . |
| | 7 | Leal, Joana Ferreira; Esteves, V.I.; Santos, E.B.H.. 2012. "Improvement of a DLLME-HPLC method for the determination of low levels of BDE-209 in water". Paper presented in <i>7º Encontro Nacional de Cromatografia, Porto, Portugal</i> . |
| | 8 | Leal, Joana Ferreira; Santos, E.B.H.; Esteves, V.I.. 2012. "BDE-209 – Kinetics of photodegradation in ethanol and water; influence of humic substances". Paper presented in <i>9th International Symposium on Environmental Geochemistry, Aveiro, Portugal</i> . |
| Conference poster | 1 | Leal, Joana F.; Neves, M.G.P.M.S.; Marques, P.A.A.P.; Santos, E.B.H.; Esteves, V.I.. 2018. "Solar photodegradation of formalin using visible light-active composites". Paper presented in <i>6th Portuguese Young Chemists Meeting</i> . |

- 2 Leal, Joana F.; Henriques, I.S.; Correia, A.; Santos, E.B.H.; Esteves, V.I.. 2016. "Atividade antibacteriana dos foto-produtos da oxitetraciclina em aquacultura marinha (Antibacterial activity of oxytetracycline photoproducts in marine aquaculture)". Paper presented in *XI Seminário aquícola nacional (Nacional aquaculture seminar)*.
- 3 Fernandes, I.J.; Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2016. "Fotodegradação do Florfenicol em Sistemas Aquáticos (Photodegradation of Florfenicol in Aquatic Systems)". Paper presented in *XXII Encontro Luso-Galego de Química*.
- 4 Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2016. "Uso da luz solar para a degradação da oxitetraciclina em águas de aquacultura marinha (Use of sunlight for the degradation of oxytetracycline in aquaculture waters)". Paper presented in *X Seminário aquícola nacional (Nacional aquaculture seminar)*.
- 5 Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2015. "Uso da formalina em piscicultura intensiva (Use of formalin in intensive fish farming)". Paper presented in *XV Congresso Nacional / I Congresso Ibérico de Acuicultura*.
- 6 Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2015. "Use of sunlight for remediation of aquaculture waters.". Paper presented in *ResearchDay*.
- 7 Leal, Joana F.; Santos, E.B.H.; Esteves, V.I.. 2013. "Filter effect of Aquatic Humic Substances: what is their role in the solar photo-degradation of organic contaminants?". Paper presented in *10ª Conferência Nacional do Ambiente / XII Congresso Nacional de Engenharia do Ambiente*.
- 8 Leal, Joana F.; Esteves, V.I.; Santos, E.B.H.. 2012. "BDE-209 - Kinetics of photodegradation in ethanol and water; influence of humic substances.". Paper presented in *9th International Symposium on Environmental Geochemistry*.
- 9 Leal, Joana F.; Filipe, O.M.S.; Lima, D.L.D.; Santos, E.B.H.; Esteves, V.I.. 2010. "Poluentes: análise e comportamento ambiental; i) estudos de adsorção em Batch – Tirame; ii) Ensaios imunoenzimáticos (ELISA) - 17a-etinilestradiol (Pollutants: environmental analysis and behavior; i) adsorption studies in Batch - Thiram; ii) Enzyme-linked immunosorbent assay (ELISA) - 17a-ethinylestradiol)". Paper presented in *Ciência 2010*.

Journal article

- 1 Leal, Joana; Esteves, V.I.; Santos, E.B.H.. 2019. "Solar photodegradation of oxytetracycline in brackish aquaculture water: New insights about effects of Ca²⁺ and Mg²⁺". *Journal of Photochemistry and Photobiology A: Chemistry* 372: 218-225. <http://www.scopus.com/inward/record.url?eid=2-s2.0-85059075491&partnerID=MN8TOARS>.
- 2 Leal, J.F.; Santos, E.B.H.; Esteves, V.I.. 2018. "Oxytetracycline in intensive aquaculture: water quality during and after its administration, environmental fate, toxicity and bacterial resistance". *Reviews in Aquaculture*. <http://www.scopus.com/inward/record.url?eid=2-s2.0-85052444205&partnerID=MN8TOARS>.
- 3 Leal, J.F.; Neves, M.G.P.M.S.; Santos, E.B.H.; Esteves, V.I.. 2018. "Use of formalin in intensive aquaculture: properties, application and effects on fish and water quality". *Reviews in Aquaculture* 10 (2): 281-295. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84995814293&partnerID=MN8TOARS>.
- 4 Leal, J.F.; Henriques, I.S.; Correia, A.; Santos, E.B.H.; Esteves, V.I.. 2017. "Antibacterial activity of oxytetracycline photoproducts in marine aquaculture's water". *Environmental Pollution* 220: 644-649. <http://www.scopus.com/inward/record.url?eid=2-s2.0-85000405825&partnerID=MN8TOARS>.
- 5 Leal, J.F.; Esteves, V.I.; Santos, E.B.H.. 2016. "Use of sunlight to degrade oxytetracycline in marine aquaculture's waters". *Environmental Pollution* 213: 932-939. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84977536906&partnerID=MN8TOARS>.
- 6 Leal, J.F.; Esteves, V.I.; Santos, E.B.H.. 2015. "Does light-screening by humic substances completely explain their retardation effect on contaminants photo-

degradation?". *Journal of Environmental Chemical Engineering* 3 (4): 3015-3019. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84920885466&partnerID=MN8TOARS>.

- 7 Leal, J.F.; Esteves, V.I.; Santos, E.B.H.. 2013. "BDE-209: Kinetic studies and effect of humic substances on photodegradation in water". *Environmental Science and Technology* 47 (24): 14010-14017. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84890750461&partnerID=MN8TOARS>.

Manual 1 Leal, Joana F.. 2011. *Manual da Qualidade para a determinação de fósforo e azoto em solos agrícolas (Quality Manual for the determination of phosphorus and nitrogen in agricultural soils)*. <http://hdl.handle.net/10773/14532>.

Thesis / Dissertation 1 Leal, Joana F.. 2017. "Photo-degradation of contaminants as a way of remediation of aquaculture's water". PhD Thesis, Universidade de Aveiro Departamento de Química. <http://hdl.handle.net/10773/22462>.

2 Leal, Joana F.. 2012. "Photodegradation of BDE-209 flame retardant". Master's Diss., Universidade de Aveiro Departamento de Química. <http://hdl.handle.net/10773/9550>.

Activities

Oral presentation

	Presentation title	Event name Host (Event location)
2018/10/24	Photo-degradation of organic contaminants, namely pharmaceuticals, in aqueous matrices: behaviour under complex matrices.	I Workshop on pharmaceuticals in the Environment: Scenarios and Challenges (Aveiro, Portugal)
2018/07/06	Is ozonation an efficient method for the treatment of marine waters?	International Meeting on Marine Research 2018 (Peniche, Portugal)
2017/05/24	Use of sunlight to degrade the antibiotic oxytetracycline: bacterial resistance prevention in brackish aquaculture.	III Analytical Chemistry Symposium: alternative technologies for pharmaceuticals removal from water (Aveiro, Portugal)
2017/03/17	Photo-degradation of oxytetracycline in marine aquaculture: use of sunlight to prevent the emergence of bacterial resistance.	2nd Aqua Improve Workshop (Matosinhos, Portugal)
2016/11/10	Do by-products of oxytetracycline retain its antibacterial activity after irradiation under sunlight?	XXII Encontro Luso-Galego de Química (XXII Luso-Galician Meeting of Chemistry). (Bragança, Portugal)
2016/06	Photo-degradation of organic contaminants in aqueous matrices: behaviour under complex matrices.	SO2S - The Singlet Oxygen Strategy: From Singlet oxygen to Sustainable Oxidation

(Gent, Belgium)

2015/09/23	Applying the sunlight to pharmaceuticals removal from aquaculture's waters.	15th EuCheMS International Conference on Chemistry and the Environment (Leipzig, Germany)
2015/06/26	Photodegradation of emerging contaminants: effect of organic matter	II Analytical Chemistry Symposium (Aveiro, Portugal)
2014/11/27	Foto-degradação de contaminantes orgânicos em sistemas aquáticos: estudos cinéticos e interações ambientais (Photodegradation of organic contaminants in aquatic systems: kinetic studies and environmental interactions).	XX Encontro Luso-galego De Química (XX Portuguese-Galician Meeting of Chemistry) (Porto, Portugal)
2014/09/04	Does light-screening by Humic Substances completely explain the retardation effect on contaminants photo-degradation?	17th Meeting of the International Humic Substances Society (Ioanina, Greece)
2014/07/18	Photo-degradation of oxytetracycline as a way of remediation of aquaculture's water	International Congress of Water, Waste and Energy Management (Porto, Portugal)
2012/01/10	Improvement of a DLLME-HPLC method for the determination of low levels of BDE-209 in water	7º Encontro Nacional de Cromatografia (7th National Meeting of Chromatography) (Porto, Portugal)

Supervision

	Thesis Title Role	Degree Subject (Type) Institution / Organization
2016/09 - 2017/07	Estudo de foto-sensibilizadores para degradação de formalina, com radiação solar (Study of photo-sensitizers for degradation of formalin with solar radiation). Co-supervisor	Biotechnology (Degree) Universidade de Aveiro Departamento de Química, Portugal
2015/09 - 2016/07	Foto-degradação do florfenicol em sistemas aquáticos (Photodegradation of Florfenicol in aquatic systems). Co-supervisor	Biotechnology (Degree) Universidade de Aveiro Departamento de Química, Portugal

Event organisation

	Event name Type of event (Role)	Institution / Organization
2017 - Current	Support to the organization of the National Aquaculture seminars. (2017) (Member of the Organising Committee)	APA - Associação Portuguesa de Aquacultores, Portugal
2018 - 2018	Support to the organization of Desafios da água - o ciclo urbano da água (Water challenges - the Urban Water Cycle) (2018/03/01 - 2018/03/02) (Member of the Organising Committee)	Águas do Algarve S.A., Portugal
2009 - 2012	Support to the organization of the Junior Chemistry Olympiads. (2009 - 2012) Member of the Organising Committee	Universidade de Aveiro, Portugal

Event participation

	Activity description Type of event	Event name Institution / Organization
2019/02/18 - 2019/02/20	Meeting Participant Meeting	Epigenetic Chemical Biology COST Scientific Workshop COST - European Cooperation in Science and Technology organization, Portugal
2016/09/15 - 2016/09/17	Scientific dissemination through demonstrations and pamphlets about photochemistry applied to the removal of antibiotics in natural waters. Exhibition	Techdays Aveiro

Jury of academic degree

	Theme Role	Candidate name (Type of degree) Institution / Organization
2016/07/12	Fotodegradação do Florfenicol em sistemas aquáticos (Photodegradation of Florfenicol in aquatic systems). Supervisor	Inês de Jesus Fernandes (Other) Universidade de Aveiro Departamento de Química, Portugal

Association member

	Society Organization	Role
2019/01/02 - Current	CCMAR - Center for Marine Sciences	Post-Doc
2014 - Current	International Humic Substances Society - IHSS	Member

2010 - Current	Sociedade Portuguesa de Química (Portuguese Society of Chemistry) - SPQ	Member
2008/12/01 - 2018/12/30	CESAM - Center for Environmental and Marine Studies	Collaborating member

Interview (newspaper / magazine)

	Activity description	Newspaper / Forum
2016/04/21	News on the solar photodegradation as a way to remediate aquaculture water.	Jornal da Economia do Mar
2016/04/20	News on the solar photodegradation as a way to remediate aquaculture water.	Diário de Notícias
2016/04/11	International news on the solar photodegradation as a way to remediate aquaculture water.	IPAC acuicultura
2016/04/08	International news on the solar photodegradation as a way to remediate aquaculture water.	AQUAHOY Portal de Información en Acuicultura

Interview (tv / radio show)

	Program	Theme
2016/11/18 - 2016/11/18	RTP Notícias	Luz solar é solução para destruir antibiótico em aquacultura marinha.
2016/05/05 - 2016/05/05	Mentes que Brilham	Uso da radiação solar para fotodegradar antibióticos em aquacultura marinha (Use of solar radiation to photodegrade antibiotics in marine aquaculture)..

Distinctions

Award

2014	Travel award by the work Does light-screening by Humic Substances completely explain the retardation effect on contaminants photo-degradation? International Humic Substances Society – IHSS , Greece
------	--