

UNIVERSITÀ DEGLI STUDI DI MILANO

Procedura di selezione per la chiamata a professore di II fascia da ricoprire ai sensi dell'art. 18, comma 1, della Legge n. 240/2010 per il settore concorsuale _____07-C1_____,
 (settore scientifico-disciplinare _____AG10_____)
 presso il Dipartimento di _____Scienze Agrarie e Ambientali_____,
 (avviso bando pubblicato sulla G.U. n. ____ G.U. 53 del 05/07/2019_) - Codice concorso __ 4111__

[Andrea Schievano]

CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	SCHIEVANO
NOME	ANDREA
DATA DI NASCITA	[08, 10, 1980]

- PERSONAL INFORMATION**

Schievano, Andrea; ORCID: 0000-0003-3458-2654; Date of birth: October 08th, 1980; Nationality: Italian; URL for web sites: www.researchgate.net/profile/Andrea_Schievano, www.esp.unimi.it, sites.unimi.it/e-biocenter.

- CURRENT POSITION(S)**

May 2019 **Researcher (Contract agent) at Joint Research Center (European Commission)**
Ispra (VA) - Italy
Monitoring Agricultural ResourceS (MARS) Unit – Food security Unit

- INSTITUTIONAL RESPONSIBILITIES**

2018-ahead **Member of the Joint research Center Gaia 2050 - <http://gaia2050.unimi.it/>**
 2016- ahead **Scientific coordinator of the e-BioCenter Joint Research Center – sites.unimi.it/e-biocenter**
 e-BioCenter is a joint research platform at University of Milan, with multidisciplinary approach on environmental applications of microbial electrochemical systems.
 2015 -ahead **Lecturer and PhD-students tutor at PhD school of Agriculture Environment and Bioenergy – University of Milan**

- ACADEMIC QUALIFICATIONS/TITLES AND AWARDS**

2013 **National Scientific qualification (Abilitazione Scientifica Nazionale) for Associate Professorship:**
 1. Agricultural engineering, forestry and biosystems (07/C1)
 2. Agricultural chemistry, genetics and pedology (07/E1)
 2010 Title of "**Cultore della materia**", (University Committee Member) in agricultural biotechnologies at University of Milan - Italy
 2010 **Award for PhD thesis "Prize in honor of Prof. Pierluigi Genevini" 2009-2010 – University of Milan**
 2010 **Award for PhD thesis in the field of Environmental Biotechnologies – Etra Spa**

- PREVIOUS POSITIONS and FELLOWSHIPS**

Sep2015 - **Researcher (RTDa) at University of Milan - Italy**
 May2019 Principal Investigator of the project: BiofuelcellAPP; SIR (Scientific Independence of Young Researchers) program 2014; Financed by Italian Ministry of University and Research (MIUR). Duration: 4-years, Grant: € 523.000
 Dec 2011 – Jun 2015 **Post-Doc research position at DiSAA, University of Milan – Italy**
 Chemical-physical and enzymatic pretreatments of biomass refinery

Jun 2011 - Nov 2011	Post-Doc research fellowship at University of Milan – Italy. Integrated technologies for biogas production, nitrogen and nutrient cycle sustainability and added-value biorefinery in agro-food and farming industries
Jan 2010 - Jan 2011	Post-Doc research fellowship at University of Milan – Italy. Anaerobic Digestion: energy production and sewage utilization in agriculture. Reduction of environmental impact related to nitrogen balance

• EDUCATION

Nov 2006 - Mar 2010	PhD degree in Agricultural Ecology at University of Milan – Italy Supervisor: Prof. Fabrizio Adani - 'Renewable energy from anaerobic fermentation of crops, organic residues and waste. Lab-scale and full-scale approaches for innovation and improvement'
2006	Laboratory internship at Danmarks Tekniske Universitet – Denmark Supervisor: Prof. R. I. Angelidaki. 'Pilot-scale two-stage biogas plant for bio-hydrogen and bio-methane, to study process imbalance and reestablishment of process stability'
2005 - 2006	Master research project in Environmental Engineering at Danmarks Tekniske Universitet - Denmark. – Supervisor: Prof. Peter Kjelsen 'Anaerobic dehalogenation of CFC gases in landfill environment – Batch Studies'
2006	National professional licence of Environmental Engineering
2000 - 2006	MSc Degree in Environmental Engineering at Università Degli Studi di Padova - Italy. Points 100/110
2003 - 2004	European Program Socrates-Erasmus – 1-year as student of Environmental engineering at Instituto Superior Técnico, Lisboa, Portugal.

• INTERNATIONAL RESEARCH EXPERIENCES

2018-2019	Collaborative research project with University of Cambridge (UK) Bioelectrochemical Nitrogen Fixation
2017-2018	Collaborative research project with University of Alcalá de Henares (Spain) Treating wastewater while recovering nutrients: electrochemical biofilters coupled to innovative biochar based cylindrical cathodes
2018	Collaborative research project with University of Lisbon (Portugal) Bioelectrochemical nitrogen fixation
Apr – Sep 2012	Collaborative research project at Penn State University (US) Supervision of a PhD student in a project regarding Microbial Electrolysis Cells.
Feb – Jun 2006	Research internship at Danmarks Tekniske Universitet (DTU, DK) Construction of a pilot plant for double stage anaerobic digestion for biohydrogen and biomethane generation from biowaste.

• SUPERVISION/TUTOR OF GRADUATE STUDENTS, PhD AND POSTDOCTORAL FELLOWS

Post-Docs	2015-2018	1. Dr. Alessandra Colombo; 2. Dr. Stefania Marzorati; 3. Dr. Laura Rago.
PhDs	2016-2018	1. Matteo Tucci; 2. Andrea Goglio
Post-lauream	2015-2018	1. Andrea Goglio; 2. Matteo Tucci; 3. Bruno Rizzi.
MSc	2009 - 2018	1. Maura Dorosini; 2. Claudio Ledda; 3. Samuele Lonati; 4. Alberto Tenca; 5. Francesco Boyer; 6. Giacomo Barlassina; 7. Gao Yong Chang; 8. Matteo Broggi
BSc	2009 - 2018	1. Annalisa Gozzi; 2. Elena Riva; 3. Enrico Consonni; 4. Filippo Volontè; 5. Luca Bonvegna; 6. Matteo Pirotta; 7. Samuele Lonati; 8. Maura Dorosini; 9. Davide Veronesi; 10. Marta Rebecchi; Giovanni Rusconi Clerici; 11. Vittorio Boneschi; 12. Vittoria Romagnano; 13. Marina Franzoni; 14. Marco Bettanello; 15. Matteo Lucchini; 16. Joishua Corradore

• TEACHING ACTIVITIES

2018-2019	Full Academic course (40 hours) at Faculty of Agriculture - University of Milan. 'Environmental pollution control in agriculture'
2017-2018	Full Academic course (40 hours) at Faculty of Agriculture - University of Milan. 'Environmental pollution control in agriculture'

2016-2017	Full Academic course (40 hours) at Faculty of Agriculture - University of Milan. 'Environmental pollution control in agriculture'
2015-2016	Full Academic course (40 hours) at Faculty of Agriculture - University of Milan. 'Environmental pollution control in agriculture'
Invited lectures:	
Feb 2016	Lecture at Master course, Faculty of Agricultural science - University of Milan - Italy 'Microbial electrochemical technologies: A tool for biotechnical cycles'
Nov 2015	Lecture at School of Environment, Tsinghua University – Beijing, China 'Microbial electrochemical technologies: A tool for bio-technical cycles'
Oct 2015	Lecture at workshop 'Bioelectric Light', World Expo 2015 – Milan, Italy 'Microbial electrochemical technologies: A tool for biotechnical cycles'
Apr 2014	Lecture at Master course, Faculty of Agricultural science - University of Milan - Italy 'Biorefinery of organic waste and agricultural residues'
Mar 2013	Lecture at Master course, Faculty of Agricultural science - University of Milan - Italy 'Biohydrogen and bio-based molecules from organic waste and agricultural residues'
Mar 2012	Lecture at Master course, Faculty of Agricultural science - University of Milan - Italy 'Dark Fermentation and other bioprocessing of residual organic materials'
Feb 2012	Lecture at technical course - Associazione Regionale Allevatori Lombardia (ARAL) 'Anaerobic digestion in the agricultural context'
Jan 2012	Lecture at Master Post-Lauream course - Associazione Milanese Laureati in Scienze Agrarie e Scienze Forestali – Milan, Italy: "Management of biomass and energy production processes"
Jul 2011	Lecture at Pennsylvania State University - USA 'Agro-energy and innovation in the EU'
Mar 2011	Lecture at Master course, Faculty of Agricultural science - University of Milan - Italy 'Dark fermentation and bio-hydrogen from residual organic matter'
Mar 2011	Lecture at technical course - ATIA-ISWA Italia, Rome, Italy 'Anaerobic Digestion of Urban Organic Waste'
Oct 2011	Lecture at workshop, Scuola di pratiche sostenibili - Italy 'Anaerobic digestion and biogas production at domestic level: towards sustainability and independence.'
2009	Intensive seminar (6 hours) at post-graduate course, University of Potenza - Italy Bioenergy in the agricultural world

• COMMISSIONS OF TRUST

Nov 2018	Invited member of International PhD evaluation committee	University of Aarhus (Denmark)
Oct 2018	Invited member of International PhD evaluation committee	University of Leon (Spain)
Dec 2016	Invited member of International PhD evaluation committee	University of Alcalà de Henares (Spain)
Sep 2016	Mid-term piloting committee for PhD thesis	IRSTEA –National Research Institute of Science and Technology for Environment and Agriculture, Rennes (France)
June 2016	Invited member of International PhD evaluation committee	University of Alcalà de Henares (Spain)
July 2015	Mid-term piloting committee for PhD thesis	IRSTEA –National Research Institute of Science and Technology for Environment and Agriculture, Rennes (France)

• MEMBERSHIP OF SCIENTIFIC SOCIETIES

2017-2018	Member, Associazione italiana biochar (i-Char)
2015-2018	Member, International Society of Microbial Electrochemical Technologies (ISMET)
2015-2018	Member, International Water Association (IWA)
2016	Member of the Royal Society of Chemistry

• MAJOR SCIENTIFIC COLLABORATIONS

Name	Faculty/Center/Department	Country	Topic	Outputs
Sanjai J. Parick	University of California-Davis	US	Biochar in Soil Science	Visiting PhD student
Silvia Vignolini Paolo Bombelli	University of Cambridge		Biosensors for herbicides detection	Visiting PhD Student

Bernardino Virdis	University of Queensland	AU	Microbial Electrosynthesis	Visiting MSc Student
Deepak Pant	Flemish Institute of Technology (VITO)	Belgium	Electro-fermentation	4 joint publications on electro-fermentation and other MES
Ricardo Louro	University of Lisbon	Portugal	Microbial electrochemical nitrogen fixation	1 joint publication
Korneel Rabaey	Ghent University	Belgium	Electro-fermentation	1 joint publication on electro-fermentation
Abraham Esteve Nuñez	University of Alcalá de Henares	Spain	Microbial electrochemical water treatment	1 exchange student 1 joint project 2 joint publications
Lucia Cavalca	University of Milan - DeFENS	Italy	Soil microbial ecology	1 joint project (proof of concept for e-BNF); 4 joint publications
Ioannis Ieropoulos	University of West England	UK	Microbial fuel cells	1 joint project on microbial fuel cells
Pierangela Cristiani	RSE Spa	Italy	Microbial fuel cells	1 joint laboratory on microbial electrochemistry 5 joint applications for funding 10 joint publications
Xia Huang	Tsinghua University	China	Microbial electrochemical sensors	1 common application for funding
Bruce E Logan	Penn State University	US	Microbial electrolysis cells	1 PhD student exchange
Jillian Goldfarb	Boston University	US	Biomass pyrolysis	1 common project, 2 joint publications
Blake Simmons	JBEY - Berkeley	US	Biomass deconstruction	1 joint publication
Renjie Dong	China Agriculture University	China	Anaerobic digestion	1 MSc visiting student here in Milan for 6 months. 1 joint publication

Scientific activity

- GRANTS AND RESEARCH PROJECTS AS PRINCIPAL INVESTIGATOR**

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role</i>	<i>Brief description</i>
Misura Rafforzamento ERC – e-BioFixN - 'Powering' biological nitrogen fixation. Microbial electrocatalysis as a step beyond the Haber-Bosch process	Cariplo Foundation	75,000	2019-2021	PI	This project is aimed at supporting the re-submission of project proposal on the call ERC-Consolidator
Extraction of Phycocyanin from Spirulina Biomass	Algaria srl	10,000	2018-2019	PI	The project aims at developing a an applicable strategy to extract the pigment phycocyanin from commercial Spirulina biomass
Transition Grant for ERC	University of Milan	80,000	2017-2019	PI	This project is aimed at developing a proof-of-concept experiment on microbial electrochemical nitrogen fixation, to present a more complete project on the next call of the ERC-Consolidator grant.
BiofuelcellAPP – Microbial fuel cells applications for nutrient recovery from agro-industrial wastewater	Italian Ministry of University and Research (MIUR) (Scientific Independence of young researchers SIR 2014 Grant)	523,000	2015-2018	PI	This project is about microbial electrochemical systems applied on wastewater treatment, nutrient recovery from agro-food sector and other environmental applications. It aims at developing new materials for largely-scalable bioelectrodes, for environmental applications.
Small-sized low-tech biogas plants from household solid waste and wastewater: de-centralized waste treatment, sanitation and bio-fuel recovery.	PS76.org, Scuola di Pratiche Sostenibili, University of Milan	20,000	2010-2013	PI	Direct experience as PI of a small project dealing with pilot-scale prototyping. Experience in project management
Start-up phase of SBR-reactors for Shell Qatar_v4 wastewater treatment using different microbial seeding	Veolia water international Spa	30,000	2010	PI	Experience as PI. Project management. Microbiological water processing systems.
Evaluation of different carbon sources for the denitrification of urban and industrial wastewaters	Veolia water international Spa	25,000	2010	PI	Experience as PI. Project management. Microbiological water processing systems.

● **PROJECTS AND GRANTS AS RESEARCH UNIT MEMBER**

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role</i>	<i>Brief description</i>
Biorefill – BIO-REFinery Integrated Lombardy Labs	Cariplo Foundation, Lombardy Region – Agriculture department	500,000	2014	Research unit member	This project contributed to unify different laboratories in a multidisciplinary collaboration. It was a fundamental for my proposal at ERC-Stg.
A full scale plant for bio-hydrogen and bio-methane production from agricultural waste.	‘ENAMA’ of Italian Ministry of Agriculture and Forestry (MIPAAF).	300,000	2013	Research unit member	Strict contact with agricultural full-scale facilities for biomass and nutrient recycling.
N-Free® technology for animal manure filtration and nutrient recovery.	Regione Lombardia, Doti di Ricerca	50,000	2012	Research unit member	Experience in nitrogen recovery from intensive farming wastewater
Bio.GesTe.Ca. – Environmental sustainability of agricultural systems.	Lombardy Region – Agriculture department	1,200,000	2011-2014	Research unit member	Wide research project on sustainable agricultural practices.
Feasibility Study for the extraction of polyphenols from olive oil solid waste (Pomace) through supercritical fluid extractions.	Veolia water group, Gruppo Ricicla-DiSAA	60,000	2011-2012	Research unit member	Experience in the agro-industrial sector
SInBioN – Systems Integration for Biogas production and Nitrogen recovery	Italian Ministry of Agriculture and Forestry (MIPAAF).	300,000	2011-2014	Research unit member	Experience dealing with nitrogen recovery in intensive farming systems
AgriIdEn - Bio-hydrogen production from agro-industrial residues and organic waste, feasibility of the full-scale biogas plants conversion to combined hydrogen and methane production.	Lombardy Region – Agriculture department	300,000	2008-2010	Research unit member	Microbiological waste processing systems.
BioBi: Biomasses for biogas. Feasibility of energy crops, agro-industrial residues and organic waste as substrates in full-scale biogas plants.	Lombardy Region – Agriculture department	300,000	2008-2010	Research unit member	Microbiological waste processing systems.
M.A.G.I.C.S. - MAXimize bioGas Income by Co-digestion and microbe Selection.	Italian Ministry for Foreign Affairs, Italy-Israel R&D Cooperation Program	100,000	2007-2008	Research unit member	Microbiological waste processing systems. International cooperation.

Early achievements track-record

• PUBLICATION METRICS AND SCIENTIFIC OUTPUT AT A GLANCE

h-index	22 (Scopus, Jul 2019) 23 (Google Scholar, Jul 2019)
Publications in major international peer-reviewed scientific journals	46
Publications in peer-reviewed conference proceedings, monographs, book chapters	30
Publications in minor/local magazines/journals	13
Patents pending	2
Total citations (Period: 2008-2018)	1384 (Scopus, Jul 2019) 1851 (Google Scholar, Jan 2019)
Co-authors	92

• ACTIVITY AS INVITED EDITOR/EDITORIAL BOARD MEMBER FOR SCIENTIFIC JOURNALS

Journals	Publisher	Issues
Bioresource Technology Reports	Elsevier	Member of Editorial Board
Bioenergy and Biofuels Frontiers in Energy Research, Chemistry, Bioengineering and Biotechnology	Frontiers in	Editor of Research Topic 'Microbial Synthesis, Gas-Fermentation and Bioelectroconversion of CO ₂ and other Gaseous Streams'
International Journal of Molecular Science	MDPI	Editor of Special Issue 'Bioelectrochemical Systems' https://www.mdpi.com/journal/ijms/special_issues/bioelectrochem_systems

• ACTIVITY AS INVITED REVIEWER FOR SCIENTIFIC JOURNALS

Publisher	Journals	Latest IF	Number of reviews 2014-2019
BioMed Central	Biotechnology for Biofuels	6.4	1
Elsevier	Energy Environmental Science	33	2
	Journal of Cleaner Production	4.9	7
	Water Research	5.9	3
	Applied Energy	5.7	2
	International Journal of Hydrogen Energy	3.2	5
	Ecological Engineering		1
	Bioelectrochemistry		2
	Journal of CO ₂ Utilization	4.7	1
	Bioresource Technology	4.8	5
	Environmental Technology and Innovation		1
	Science Of the Total Environment		2
	Journal of Environmental Chemical Engineering		1
	Chemosphere		2
	Resources conservation and recycling		1
	Renewable energy	2.8	2
	Waste Management	3.8	19
	Geoderma		1
	Bioresource Technology Reports		2
Springer	Environmental Science and Pollution Research	2.8	1
	Bioenergy Research	3.3	1
-	Biofuel Research Journal	-	1
Taylor & Francis	Environmental Technology	1.6	2
Widener University School of Engineering	Journal of Solid Waste Technology Management	0.9	2
Science Domain International	British Journal of Applied Science & Technology	0.8	1

PUBLICATIONS

• PUBLICATIONS IN INTERNATIONAL PEER-REVIEWED SCIENTIFIC JOURNALS (* =CORRESPONDING AUTHOR)

date * = corresponding author

Under review /submitted	<p>ACS – Sustainable Chemistry and Engineering Electroactive biochar (e-biochar) for large-scale applications of microbial electrochemistry Andrea Schievano*, Raul Berenguer, Stefania Marzorati, Laura Rago, Ricardo O. Louro, Catarina M. Paquete, Abraham Esteve-Núñez</p>
2019	<p>Waste Management 87 (2019) 546-558 Statistical analysis for the quality assessment of digestates from separately collected organic fraction of municipal solid waste (OFMSW) and agro-industrial feedstock. Should input feedstock to anaerobic digestion determine the legal status of digestate? Giovanni Beggio, Andrea Schievano, Tiziano Bonato, Pierre Hennebert and Alberto Pivato*</p> <p>Bioresource Technology Reports 5 (2019) 157-163 Study of microbial dynamics during optimization of hydrogen production from food waste by using LCFA-rich agent Razieh Rafieenia, Alberto Pivato*, Stefano Campanaro, Laura Treu, Andrea Schievano, Maria Cristina Lavagnolo</p> <p>Electrochimica Acta 302 (2019) 102-108 Microbial amperometric biosensor for online herbicide detection: Photocurrent inhibition of <i>Anabaena variabilis</i> Matteo Tucci, Matteo Grattieri, Andrea Schievano, Pierangela Cristiani, Shelley D.Minteer</p> <p>Bioresource Technology 277 (2019) 117-127 Microbial recycling cells: first steps into a new type of microbial electrochemical technologies, aimed at recovering nutrients from wastewater Andrea Goglio, Stefania Marzorati, Laura Rago, Deepak Pant, Pierangela Cristiani, Andrea Schievano*</p> <p>Bioresource Technology 277 (2019) 148-156 Suppressing methanogens and enriching electrogens in bioelectrochemical systems Deepak Jadhav, Ashvini Chendake, Andrea Schievano, Deepak Pant</p> <p>Science of the Total Environment 649 (2019) 1349-1361 Microbial recycling cells (MRCs): a new platform of microbial electrochemical technologies based on biocompatible materials, aimed at cycling carbon and nutrients in agro-food systems Andrea Goglio, Matteo Tucci, Bruno Rizzi, Alessandra Colombo, Pierangela Cristiani, Andrea Schievano*</p> <p>Bioelectrochemistry 125, February 2019, Pages 105-115 Bioelectrochemical Nitrogen fixation (e-BNF). Electro-stimulation of enriched biofilm communities drives autotrophic nitrogen and carbon fixation Laura Rago, Sarah Zecchin, Federica Villa, Anna Corsini, Andrea Goglio, Lucia Cavalca, Andrea Schievano*</p> <p>International Journal of Hydrogen Energy 44, 9 (2019) 4496-4507 Air-Breathing Bio-cathodes Based on Electro-Active Biochar from Pyrolysis of Giant Cane Stalks S. Marzorati, A. Goglio, S. Fest-Santini, D. Mombelli, F. Villa, P. Cristiani, A. Schievano*</p>
2018	<p>Bioresource Technology 267 (2018) 445-457 Dark fermentation metabolic models to study strategies for hydrogen consumers inhibition Razieh Rafieenia, Alberto Pivato*, Andrea Schievano, Maria Cristina Lavagnolo</p> <p>Detritus (2018) 01, X -7 Organic waste and bioelectrochemical systems: a future interface between electricity and methane distribution grids. Andrea Schievano*, Andrea Goglio, Christof Erckert, Stefania Marzorati, Laura rago, Pierangela Cristiani.</p> <p>J. Clean. Prod. 170 (2018) 1167-1176. doi:10.1016/j.jclepro.2017.09.142 Ligno-cellulosic materials as air-water separators in low-tech microbial fuel cells for nutrients recovery S. Marzorati, A. Schievano*, A. Colombo, G. Lucchini, P. Cristiani</p> <p>Waste Manag. 71 (2018) 785-791. doi:10.1016/J.WASMAN.2017.06.012 Single-chamber microbial fuel cells as on-line shock-sensors for volatile fatty acids in anaerobic digesters. A. Schievano*, A. Colombo, A. Cossettini, A. Goglio, V. D'Ardes, S. Trasatti, P. Cristiani</p> <p>Journal of Food Engineering 224 (2018) 139e147 Whey protein concentrate (WPC) production: Environmental impact assessment Jacopo Bacenetti*, Luciana Bava, Andrea Schievano, Maddalena Zucali</p>

	<p>Bioelectrochemistry. 120 (2018) 18–26. doi:10.1016/j.bioelechem.2017.11.005. A study of microbial communities on terracotta separator and on biocathode of air breathing microbial fuel cells L. Rago, S. Zecchin, S. Marzorati, A. Goglio, L. Cavalca, P. Cristiani, <u>A. Schievano*</u></p>
2017	<p>Bioresour. Technol. 237 (2017). doi:10.1016/j.biortech.2017.03.038 Assisting cultivation of photosynthetic microorganisms by microbial fuel cells to enhance nutrients recovery from wastewater. A. Colombo, S. Marzorati, G. Lucchini, P. Cristiani, D. Pant, <u>A. Schievano*</u></p> <p>Bioelectrochemistry. 116 (2017). doi:10.1016/j.bioelechem.2017.04.001 Influences of dissolved oxygen concentration on biocathodic microbial communities in microbial fuel cells. L. Rago, P. Cristiani, F. Villa, S. Zecchin, A. Colombo, L. Cavalca, <u>A. Schievano*</u></p> <p>International Journal of Hydrogen Energy (2017) 1841 - 1852 Signal trends of microbial fuel cells fed with different food-industry residues Alessandra Colombo, <u>Andrea Schievano</u>, Stefano P. Trasatti, Raffaele Morrone, Nicola D'Antona, Pierangela Cristiani*</p> <p>Journal of Power Sources 340 (2017), 80–88 Floating microbial fuel cells as energy harvesters for signal transmission from natural water bodies <u>Andrea Schievano</u>, Alessandra Colombo, Matteo Grattieri, Stefano P. Trasatti, A. Liberale, Paolo Tremolada, Claudio Pino, Pierangela Cristiani*</p>
2016	<p>Waste Management 56 (2016) 519–529 Dark fermentation, anaerobic digestion and microbial fuel cells: an integrated system to valorize swine manure and rice bran <u>Andrea Schievano</u>, Gao Chang Chang, Tommy Pepè Sciarria, Silvia Salati, Barbara Scaglia, Marina Zanardo, Wei Quiao, Renjie Dong, Fabrizio Adani*</p> <p>Trends in Biotechnology DOI: 10.1016/j.tibtech.2016.04.007 Electro-fermentation – Merging electrochemistry with fermentation. <u>Andrea Schievano</u>, Tommy Pepè Sciarria, Karolien Vanbroekoven, Heleen De Wever, Sebastià Puig, Stephen J Andersen, Korneel Rabaey, Deepak Pant*</p> <p>Bioresource Technology doi:10.1016/j.biortech.2016.03.052 Electro-stimulated Microbial Factory for value added product synthesis Shantonu Roy, <u>Andrea Schievano</u>, Deepak Pant*</p> <p>Biomass and Bioenergy. 95 (2016). doi:10.1016/j.biombioe.2016.09.007. The fixed dome digester: An appropriate design for the context of Sub-Sahara Africa? J.N. Mungwe, E. Colombo, F. Adani, <u>A. Schievano*</u></p> <p>Journal of Cleaner Production, 112 (2016) 103-112 Integration of microalgae production with anaerobic digestion of dairy cattle manure: An overall mass and energy balance of the process. Ledda, C., <u>Schievano, A.</u>, Scaglia, B., Rossoni, M., Acien Fernández, F.G., Adani, F.*</p>
2015	<p>International Journal of Energy Research, 2015; 39:1519–1527 Dark fermentation effectiveness as a key step for waste biomass refineries: influence of organic matter macromolecular composition and bioavailability. Ester Manzini, Barbara Scaglia, <u>Andrea Schievano*</u> and Fabrizio Adani</p> <p>Green Chemistry, 2015, 17, 2874 An integrated biorefinery concept for olive mill waste management: supercritical CO2 extraction and energy recovery <u>Andrea Schievano*</u>, Fabrizio Adani*, Li Buessing, Alfonso Botto, Esteve N. Casoliba, Mara Rossoni, Jillian L. Goldfarb</p> <p>Bioresource Technology 183 (2015) 101–110 Comparison of different pretreatments for the production of bioethanol and biomethane from corn stover and switchgrass G. Papa, S. Rodriguez, A. George, <u>A. Schievano</u>, V. Orzi, K.L. Sale, S. Singh, F. Adani*, B.A. Simmons</p> <p>Global Change Biology – Bioenergy – 2015, 7 (4), pp. 899-908 Biogas from dedicated energy crops in Northern Italy: electric energy generation costs. <u>Andrea Schievano*</u>, Giuliana D'Imporzano, Valentina Orzi, Giorgio Colombo, Tommaso Maggiore, Fabrizio Adani*</p> <p>Environment Development and Sustainability 2015, 17 (5), 1227–1241 Domestic low-tech anaerobic digesters in Guine'-Bissau: a bench-scale preliminary study on locally available waste and wastewater. Andrea Gallia, Davide Veronesi, Umaro Spencer Embalò, Filippo Pongiglione, Fabrizio Adani, <u>Andrea Schievano*</u></p>

2014	<p>Waste Management 2014, 34(8), 1429-35. Production costs and operative margins in electric energy generation from biogas. Full-scale case studies in Italy. Riva C., <u>Schievano A.</u>*, D'Imporzano G., Adani F</p> <p>Applied Energy 124 2014, 335–342 Can two-stage instead of one-stage anaerobic digestion really increase energy recovery from biomass? <u>Andrea Schievano</u>*, Alberto Tenca, Samuele Lonati, Ester Manzini, Fabrizio Adani</p> <p>Biogeochemistry 2014, 117, 2-3, 313-324 Nanoscale structure of organic matter could explain litter decomposition Gabriella Papa, Barbara Scaglia, <u>Andrea Schievano</u>, Fabrizio Adani*</p>
2013	<p>Water Research 2013, 47, 6157-6166 Nitrogen and water recovery from animal slurries by a new integrated ultrafiltration, reverse osmosis and cold stripping process: A case study C. Ledda, <u>A. Schievano</u>*, S. Salati, F. Adani*</p> <p>Water Research 2013, 47 (6), 1983-1995 Microbial community structure and dynamics in two-1 stage vs single-stage 2 thermophilic anaerobic digestion of mixed swine slurry and market bio-waste Giuseppe Merlino, Aurora Rizzi, <u>Andrea Schievano</u>, Alberto Tenca, Barbara Scaglia, Roberto Oberti, Fabrizio Adani, Daniele Daffonchio*</p> <p>International Journal of Hydrogen Energy 2013, 38 (4), 1859–1865 Evaluation of low cost cathode materials for treatment of industrial and food processing wastewater using microbial electrolysis cells Alberto Tenca, Roland D. Cusick, <u>Andrea Schievano</u>, Roberto Oberti, Bruce E. Logan*</p>
2012	<p>Environmental Science Technology 2012, 46, 8502-8510 Two-Stage vs Single-Stage Thermophilic Anaerobic Digestion: Comparison of Energy Production and Biodegradation Efficiencies <u>Andrea Schievano</u>*, Alberto Tenca, Barbara Scaglia, Giuseppe Merlino, Aurora Rizzi, Daniele Daffonchio, Roberto Oberti, and Fabrizio Adani*</p>
2011	<p>Biocycle, October 2011 Sustainable management of nitrogen and nutrients Adani, F.*, D'Imporzano, G., <u>Schievano A.</u>, Boccasile, G., Sommariva, F., Deias, A.</p> <p>Bioresource Technology 2011, 102, 8814–8819 On-field study of anaerobic digestion full-scale plants (Part II): new approaches in monitoring and evaluating process efficiency <u>Andrea Schievano</u>*, Giuliana D'Imporzano, Valentina Orzi, Fabrizio Adani*</p> <p>Bioresource Technology 2011, 102, 7737–7744 On-field study of anaerobic digestion full-scale plants (Part I): an on-field methodology to determine mass, carbon and nutrients balance <u>Andrea Schievano</u>*, Giuliana D'Imporzano, Silvia Salati, Fabrizio Adani*</p> <p>Bioresource Technology 2011, 102, 7910–7916 Looking for practical tools to achieve next-future applicability of dark fermentation to produce bio-hydrogen from organic materials in Continuously Stirred Tank Reactors Tenca A., <u>Schievano A.</u>, Lonati, S., Malagutti L, Oberti R, Adani F*</p> <p>Bioresource Technology 2011, 102, 8582–8588 Biohydrogen from thermophilic co-fermentation of swine manure with fruit and vegetable waste: Maximizing stable production without pH control Tenca, <u>A. Schievano</u>, F. Perazzolo, F. Adani, and R. Oberti*</p> <p>Environmental Science Technology 2011, 45, 1107-1113 Nanoscale Structure of the Cell Wall Protecting Cellulose from Enzyme Attack Fabrizio Adani*, Gabriella Papa, <u>Andrea Schievano</u>, Giovanni Cardinale, Giuliana D'Imporzano and Fulvia Tambone</p>
2010	<p>Chemosphere 2010, 81, 577-583 Assessing amendment and fertilizing properties of digestates from anaerobic digestion though a comparative study with digested sludge and compost Fulvia Tambone, Barbara Scaglia, Giuliana D'Imporzano, <u>Andrea Schievano</u>, Valentina Orzi, Silvia Salati, Fabrizio Adani*</p>

Bioresource Technology 2010, 101, 1873-2976

Evaluating inhibition conditions in high-solids anaerobic digestion of organic fraction of municipal solid waste

Andrea Schievano, Giuliana D'Imporzano, Luca Malagutti, Emilio Fragali, Gabriella Ruboni, Fabrizio Adani*

2009

Bioresource Technology 2009, 100, 5777-5782

Prediction of biogas potentials using quick laboratory analyses: upgrading previous models for application to heterogeneous organic matrices

Andrea Schievano, Barbara Scaglia, Giuliana D'Imporzano, Luca Malagutti, Annalisa Gozzi, Fabrizio Adani*

Journal of Environmental Management 2009, 90, 2537-2541

Substituting energy crops with organic wastes and agro-industrial residues for biogas production

A. Schievano*, G. D'Imporzano, F. Adani*

2008

Bioresource Technology 2008, 99, 8112-8117

Predicting anaerobic biogasification potential of ingestates and digestates of a full scale biogas plant by using chemical and biological parameters

A. Schievano, M. Pognani, G. D'Imporzano, F. Adani*

• **RESEARCH MONOGRAPHS/BOOK CHAPTERS (*=CORRESPONDING AUTHOR)**

2016

Author of book chapter

Shantonu Roy, Stefania Marzorati, Andrea Schievano, Deepak Pant*. 'Microbial fuel cells'. Pages 245-259 In: Reference module in Earth Systems and Environmental Science – Elsevier 2017. Editors: Scott A. Elias, Martin Abraham. Doi: 10.1016/B978-0-12-409548-9.10122-8

2012

Author of book chapter

Le Agroenergie nei nuovi scenari energetici - ISBN:9788890955402

A. Schievano, G. D'Imporzano, F. Adani. La sostenibilità agricola e ambientale.

2011

Author of book chapter

Biomasse ed Energia - ISBN:978-88-387-6527-8

A. Schievano, C. Ledda, G. D'Imporzano, F. Adani*. Nuovi approcci per il monitoraggio e l'ottimizzazione degli impianti di biogas.

2009

Book Editor

Anaerobic digestion, opportunities for agriculture and environment. ISBN: 978-88-903746-0-9

Edited by Fabrizio Adani, Andrea Schievano, Gabriele Boccasile. Lombardy Region Press.

• **TALKS, PUBLICATIONS AND SESSION CHAIRMAN AT INTERNATIONAL CONFERENCES (*=CORRESPONDING AUTHOR)**

2018

Biorestec conference 2018 – International conference on bioresource technology, bioenergy and environmental sustainability

- Microbial recycling cells (MRCs): a new platform of microbial electrochemical technologies based on biocompatible materials, aimed at cycling carbon and nutrients in agro-food systems. Andrea Schievano*, Andrea Goglio, Stefania Marzorati, Matteo Tucci, Bruno Rizzi, Pierangela Cristiani

EU-ISMET 2018 – International Society of Microbial Electrochemical Technology (ISMET) - The 4th European Meeting 2018

- Bioelectrochemical nitrogen fixation (e-BNF) towards the electrosynthesis of biomass. Andrea Schievano*, Laura Rago, Andrea Goglio, Bruno Rizzi, Stefania Marzorati, Sarah Zecchin, Lucia Cavalca
- Amperometric herbicide biosensor based on photocurrent inhibition of *Anabaena variabilis*. Matteo Tucci, Matteo Grattieri, Shelley Minter, Andrea Schievano, Pierangela Cristiani*
- Microbial recycling cells (MRCs): Coupling novel air cathodes and electrochemical biofilters for nutrients recovery from food-industry wastewater. Andrea Goglio, Stefania Marzorati, Amanda Prado de Nicolás, Carlos Manchón Vázquez, Cristina Ortiz Martín, Colin Wardman, Abraham Esteve Núñez, Andrea Schievano*
- Biochar: Electroactive Biocharcoal-based Electrodes for Bioelectrochemical Systems. S. Marzorati, A. Goglio, M. Bahdanchyk, S. Trasatti, P. Cristiani, A. Schievano*

SUM 2018 – 4th Symposium on Urban Mining and Circular Economy

- MICROBIOENERGY® – Bioenergy from biomass and distributed resources for sustainable housing. Mara Zantedeschi, Andrea Brugnolli, Claudio Marabiso, Simone Muraro, Andrea Schievano*
- Nutrients recovery from digestate liquid fraction. Andrea Schievano*

Carbon conference 2018 – Madrid, Spain

- Biomass-derived electrodes for bioelectrochemical systems. S. Marzorati, M. Bahdanchyk, A. Goglio, S. Trasatti, P. Cristiani, [A. Schievano](#)*

Agriobioestimulants Conference - 13-14 June 2018, Milan, Italy

- e-NEWtrients: Microbial electrochemical technologies help in recovering nutrients from wastewater and obtaining renewable soil conditioners and fertilizers. [Andrea Schievano](#)*

YAS 2018 – Young algaeeneers symposium

- Combining microalgae and electroactive microbial communities for nutrients recovery from wastewater: an approach for scale-up. B. Rizzi, A. Colombo, G. Rusconi Clerici, A. Idà, [A. Schievano](#)*

2017

European Fuel Cell Technology & Applications Conference - Piero Lunghi Conference. December 12-15, 2017, Naples, Italy

- The challenge of nutrients recovery by terracotta Microbial Fuel Cells. Goglio, S. Marzorati, S. Quarto, E. Falletta, P. Cristiani, [A. Schievano](#)*
- Giant cane as low-cost material for microbial fuel cells architectures. S. Marzorati, A. Goglio, D. Mombelli, C. Mapelli, S.P. Trasatti, P. Cristiani, [A. Schievano](#)*
- New terracotta-based microbial fuel cells treat wastewater while providing nutrients for microalgae cultivation. A. Colombo, G. Rusconi Clerici, A. Idà, M. Rebecchi, and [A. Schievano](#)*
- Floating MFC for BOD monitoring in real time: field tests in a wastewater treatment plant. M. Tucci, A. Goglio, [A. Schievano](#), and P. Cristiani*

Sardinia Symposium 2017 – S.Margherita di Pula (Ca, Italy)

- Chairman of session: WORKSHOP: INNOVATIVE APPLICATIONS OF MFC TECHNOLOGIES TO WASTE MANAGEMENT.
- Introductory lecture: [A. Schievano](#)*, A. Goglio, C. Erckert, S. Marzorati (IT) / Organic waste and bioelectrochemical systems: the future interface between electricity and methane grids
- The “La la land” project: lithotrophic microbial activity and aeration applications to landfills for a landscape requalification. A. Pivato*, R. Raga, S. Marzorati, M.C. Lavagnolo, G. Cerminara, E. Romio, G. Agostini, F. Peres, [A. Schievano](#)
- WORKSHOP: TESTING BIOLOGICAL STABILITY OF BIODEGRADABLE WASTE. Application of microbial fuel cells (MFCS) as biosensors for BOD concentrations in waste eluates. [A. Schievano](#)*

International Society of Microbial Electrochemical Technology (ISMET) - The 6th International Meeting (2017)

- Treating wastewater while recovering nutrients: electrochemical biofilters coupled to innovative biochar-based cylindrical cathodes. Andrea Goglio, Stefania Marzorati, Amanda Prado de Nicolás, Colin Wardman, Laura Rago, Abraham Esteve Núñez, [Andrea Schievano](#)*
- A new applicative frontier for microbial fuel cells: bioelectrochemical fertilizers. [Andrea Schievano](#)*, Andrea Goglio, Stefania Marzorati, Alessandra Colombo, Laura Rago
- Integrating microbial electrochemical systems in microalgae ponds for organic-rich wastewater treatment. Alessandra Colombo, Giovanni Rusconi Clerici, Marta Rebecchi, Stefano Lanzoni, Antonino Idà, [Andrea Schievano](#)*
- Wastewater treatment plant field application of a real time MFC-based BOD sensor. Matteo Tucci, Andrea Goglio, [Andrea Schievano](#), Pierangela Cristiani*
- Ligno-cellulosic Materials as Low-cost Microbial Fuel Cells Architectures for Nutrients Recovery. Stefania Marzorati, Andrea Goglio, Laura Rago, Pierangela Cristiani, [Andrea Schievano](#)*

2016

International Society of Microbial Electrochemical Technology (ISMET) - The 3rd European Meeting 2016

- Electrochemical stimulation of *Thermotoga Neapolitana* cultures. P. Cristiani*, [A. Schievano](#), M. Tucci, G. D'Ippolito, L. Dipasquale, A. Fontana
- Anodic biofilm microbial communities grown in different microbial electrochemical cells: comparison of metagenomics analysis. L. Rago, [A. Schievano](#), J. A. Baeza, A. Guisasola*
- New floating MFCs for Energy harvesting. A cell design overview. D. Perrino, S. Trasatti, [A. Schievano](#), P. Cristiani*

European Materials Research Society (E-MRS) - 2016 Fall meeting

- Quantitative study of carbonates deposition in biocathodes by 3-D X-ray microcomputed tomography. S. Marzorati, M. Lorenzi, S. Fest-Santini, M. Santini, S. P. Trasatti, [A. Schievano](#), P. Cristiani*

Venice Symposium 2016, 6th International Symposium on Energy from Biomass and Waste

- A novel microbial electrochemical sensor for on-line monitoring anaerobic biodegradation processes. [A. Schievano](#)*, A. Colombo, V. d'Ardes, S. Trasatti, P. Cristiani

LET 2016; 13th conference of on water and wastewater technologies - International Water association (IWA)

- Experiences of floating microbial fuel cells, supplying on-line sensors for water quality. [A. Schievano](#)*, F. Pizza, C. Pino, D. Perrino, A. Colombo, P. Cristiani
-

2012	Orbit 2012 – Rennes (France). <ul style="list-style-type: none"> - Can two-stage anaerobic digestion improve energy recovery from biomass? E. Manzini, <u>A. Schievano</u>, S. Lonati and F. Adani* SIDISA 2012 – 11th edition of Italian-Brazilian Symposium of Sanitary and Environmental Engineering <ul style="list-style-type: none"> - From composting to Anaerobic Digestion. F Adani*, L Terruzzi, G D'Imporzano, A Schievano, C Ledda, S Salati, V Orzi, F Tambone
2009	Ecomondo 2009 – Rimini (Italy) <ul style="list-style-type: none"> - Preventing inhibition in high-solids anaerobic digestion of organic fraction of municipal solid waste. G D'Imporzano, A Schievano, F Adani* - Bio-hydrogen production from bio-waste: ready for full-scale applications? A Schievano, E Consonni, A Tenca, R Oberti, F Adani* HYPOTHESIS VIII Lisbon (Portugal) April 1-3, 2009 <ul style="list-style-type: none"> - An operational strategy to produce Bio-hydrogen: the use of digestate for process control. A Schievano, A Tenca, R Oberti, F Adani*

Data

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Luogo

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