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Dipartimento di Ingegneria Civile, Ambientale e Meccanica
UNIVERSITÀ DEGLI STUDI DI TRENTO
Via Mesiano, 77 - 38050 TRENTO

CURRICULUM

Posizione attuale

Professore ordinario di Ingegneria Sanitaria-Ambientale (Gruppo ICAR 03) presso il Dipartimento di Ingegneria Civile, Ambientale e Meccanica dell'Università degli Studi di Trento.

Curriculum Vitae

Laureato con lode in Ingegneria Civile Idraulica presso il Politecnico di Milano, ha iniziato la sua carriera scientifica presso l'Istituto di Ingegneria Sanitaria del medesimo Politecnico, conseguendo nel 1989 il titolo di Dottore di Ricerca con una tesi sperimentale sulla rimozione biologica dei nutrienti dalle acque di scarico. Negli anni 1990 e 1991 ha lavorato come ricercatore presso l'Istituto per l'Ambiente. Dal 1991 al 1993 ha svolto attività di ricerca come borsista post-dottorato presso il Dipartimento di Ingegneria Idraulica, Ambientale e del Rilevamento del Politecnico di Milano. Dal 1993 svolge attività didattica e di ricerca presso l'Università di Trento. Dal 2008 è professore Ordinario presso la stessa sede.

Attività scientifica

Ha sempre svolto attività di ricerca nell'ambito dell'Ingegneria Sanitaria-Ambientale, occupandosi in particolare di trattamenti delle acque reflue, dei fanghi, dei rifiuti e dei terreni contaminati.

In questi ed altri settori di ricerca ha svolto numerosi lavori sperimentali e modellistici pubblicati su riviste italiane e straniere o presentati a Congressi nazionali ed internazionali.

E' Autore o co-autore di oltre 200 pubblicazioni nazionali ed internazionali.

E' co-autore di 3 brevetti nel settore delle tecnologie innovative di riduzione dei fanghi di depurazione.

E' responsabile del Laboratorio di Ingegneria Sanitaria Ambientale (LISA)

dell'Università di Trento.

Svolge con la sua struttura di laboratorio e con collaboratori qualificati (ricercatori, dottori di ricerca, borsisti, post-doc, assegnisti) attività di supporto tecnico e consulenza di processo ed impiantistica ad Enti territoriali ed Aziende.

Parametri Scopus (aggiornati al 28/04/2020)

H index 26; Pubblicazioni internazionali catalogate: 85; 2058 citazioni.

Pubblicazioni internazionali (2015-2020 - n. 29)

Petrini, S., Foladori, P., Beghini, F., Armanini, F., Segata, N., **Andreottola, G.**
57201460119;23034249300;57196287589;57197812443;14016713700;21233712800;
How inoculation affects the development and the performances of microalgal-bacterial consortia treating real municipal wastewater
(2020) Journal of Environmental Management, 263, art. no. 110427, .
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081231840&doi=10.1016%2fj.jenvman.2020.110427&partnerID=40&md5=93851da2fe57f68de0bffa1db149af3>
DOI: 10.1016/j.jenvman.2020.110427

Foladori, P., Petrini, S., **Andreottola, G.**
23034249300;57201460119;21233712800;
How suspended solids concentration affects nitrification rate in microalgal-bacterial photobioreactors without external aeration
(2020) Heliyon, 6 (1), art. no. e03088, .
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076971570&doi=10.1016%2fj.heliyon.2019.e03088&partnerID=40&md5=6c81b53551bf95798518708837d6e4dd>
DOI: 10.1016/j.heliyon.2019.e03088

Mancuso, G., Langone, M., **Andreottola, G.**, Bruni, L.
56995770000;55059630300;21233712800;15736879300;
Effects of hydrodynamic cavitation, low-level thermal and low-level alkaline pre-treatments on sludge solubilisation
(2019) Ultrasonics Sonochemistry, 59, art. no. 104750, . Cited 2 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071401099&doi=10.1016%2fj.ultsonch.2019.104750&partnerID=40&md5=96b153e22cce3465a0cc00cc8e57ff33>
DOI: 10.1016/j.ultsonch.2019.104750

Ferrentino, R., Merzari, F., Fiori, L., **Andreottola, G.**
56507116600;57003305800;21733651900;21233712800;
Biochemical Methane Potential Tests to Evaluate Anaerobic Digestion Enhancement by Thermal Hydrolysis Pretreatment
(2019) Bioenergy Research, 12 (3), pp. 722-732.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85069184111&doi=10.1007%2fs12155->

019-10017-6&partnerID=40&md5=a6faba419635d11477d0f5948d0e9034

DOI: 10.1007/s12155-019-10017-6

Rada, E.C., **Andreottola, G.**, Istrate, I.A., Viotti, P., Conti, F., Magaril, E.R.

10440805000;21233712800;35102293800;6701339843;23982038100;57198456177;

Remediation of soil polluted by organic compounds through chemical oxidation and phytoremediation combined with DCT

(2019) International Journal of Environmental Research and Public Health, 16 (17), art. no. 3179, . Cited 4 times.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071772280&doi=10.3390/ijerph16173179&partnerID=40&md5=ba0ffc19a038899fee3fa306d4174cbd)

[85071772280&doi=10.3390/ijerph16173179&partnerID=40&md5=ba0ffc19a038899fee3fa306d4174cbd](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071772280&doi=10.3390/ijerph16173179&partnerID=40&md5=ba0ffc19a038899fee3fa306d4174cbd)

DOI: 10.3390/ijerph16173179

Ferrentino, R., Langone, M., Vian, M., **Andreottola, G.**

56507116600;55059630300;57201032782;21233712800;

Application of real-time nitrogen measurement for intermittent aeration implementation in a biological nitrogen removal system: performances and efficiencies

(2019) Environmental Technology (United Kingdom), 40 (19), pp. 2513-2526. Cited 2 times.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85042929874&doi=10.1080/09593330.2018.1444102&partnerID=40&md5=42f1825cd24c68b3f986d0a6c3f18508)

[85042929874&doi=10.1080/09593330.2018.1444102&partnerID=40&md5=42f1825cd24c68b3f986d0a6c3f18508](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85042929874&doi=10.1080/09593330.2018.1444102&partnerID=40&md5=42f1825cd24c68b3f986d0a6c3f18508)

DOI: 10.1080/09593330.2018.1444102

Merzari, F., Langone, M., **Andreottola, G.**, Fiori, L.

57003305800;55059630300;21233712800;21733651900;

Methane production from process water of sewage sludge hydrothermal carbonization. A review. Valorising sludge through hydrothermal carbonization

(2019) Critical Reviews in Environmental Science and Technology, 49 (11), pp. 947-988. Cited 5 times.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85060953126&doi=10.1080/10643389.2018.1561104&partnerID=40&md5=469ce0661acb8145e4bbfc3d6bd7baaa)

[85060953126&doi=10.1080/10643389.2018.1561104&partnerID=40&md5=469ce0661acb8145e4bbfc3d6bd7baaa](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85060953126&doi=10.1080/10643389.2018.1561104&partnerID=40&md5=469ce0661acb8145e4bbfc3d6bd7baaa)

DOI: 10.1080/10643389.2018.1561104

Velho, V.F., **Andreottola, G.**, Foladori, P., Costa, R.H.R.

55236620400;21233712800;23034249300;7006572370;

The effects of a full-scale anaerobic side-stream reactor on sludge decay and biomass activity

(2019) Water Science and Technology, 79 (6), pp. 1081-1091.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85065789619&doi=10.2166/wst.2019.104&partnerID=40&md5=0d2cf45920c3247723c885fd7b58ff24)

[85065789619&doi=10.2166/wst.2019.104&partnerID=40&md5=0d2cf45920c3247723c885fd7b58ff24](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85065789619&doi=10.2166/wst.2019.104&partnerID=40&md5=0d2cf45920c3247723c885fd7b58ff24)

DOI: 10.2166/wst.2019.104

Ferrentino, R., Merzari, F., **Andreottola, G.**

56507116600;57003305800;21233712800;

Optimisation of Fe²⁺ /H₂O₂ ratio in Fenton process to increase dewaterability and solubilisation of sludge

(2019) Environmental Technology (United Kingdom), . Cited 1 time.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85063212189&doi=10.1080/09593330.2019.1589583&partnerID=40&md5=0e934655dfb356)

[85063212189&doi=10.1080/09593330.2019.1589583&partnerID=40&md5=0e934655dfb356](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85063212189&doi=10.1080/09593330.2019.1589583&partnerID=40&md5=0e934655dfb356)

271428581fdf143334
DOI: 10.1080/09593330.2019.1589583

Ferrentino, R., Langone, M., **Andreottola, G.**
56507116600;55059630300;21233712800;
Progress toward full scale application of the anaerobic side-stream reactor (ASSR) process
(2019) *Bioresource Technology*, 272, pp. 267-274. Cited 1 time.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85055129767&doi=10.1016%2fj.biortech.2018.10.028&partnerID=40&md5=23fbe6639a9fa237216cf3204eb01055>
DOI: 10.1016/j.biortech.2018.10.028

Langone, M., Ferrentino, R., Freddi, F., **Andreottola, G.**
55059630300;56507116600;57204481580;21233712800;
Anaerobic digestion of blood serum water integrated in a valorization process of the bovine blood treatment
(2019) *Biomass and Bioenergy*, 120, pp. 1-8. Cited 2 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85055738521&doi=10.1016%2fj.biombioe.2018.10.015&partnerID=40&md5=24e1ab0b26df1e0ee04acd28e6a4fe5>
DOI: 10.1016/j.biombioe.2018.10.015

Ferrentino, R., Ferraro, A., Mattei, M.R., Esposito, G., **Andreottola, G.**
56507116600;56789664900;56262461800;57192714731;21233712800;
Process performance optimization and mathematical modelling of a SBR-MBBR treatment at low oxygen concentration
(2018) *Process Biochemistry*, 75, pp. 230-239. Cited 4 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85053017294&doi=10.1016%2fj.procbio.2018.08.023&partnerID=40&md5=11efaa38235b7eb0ed885a2fc9c8df74>
DOI: 10.1016/j.procbio.2018.08.023

Petrini, S., Foladori, P., **Andreottola, G.**
57201460119;23034249300;21233712800;
Laboratory-scale investigation on the role of microalgae towards a sustainable treatment of real municipal wastewater
(2018) *Water Science and Technology*, 78 (8), pp. 1726-1732. Cited 3 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85058111574&doi=10.2166%2fwst.2018.453&partnerID=40&md5=4adb1cc19123dabd3b13157459c6ad8a>
DOI: 10.2166/wst.2018.453

Ferrentino, R., Langone, M., Villa, R., **Andreottola, G.**
56507116600;55059630300;23983746200;21233712800;
Strict anaerobic side-stream reactor: Effect of the sludge interchange ratio on sludge reduction in a biological nutrient removal process
(2018) *Environmental Science and Pollution Research*, 25 (2), pp. 1243-12536. Cited 7 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85032662249&doi=10.1007%2fs11356-017-0448-6&partnerID=40&md5=b4d264f00fc397e3840e0ca2b6bd3bb9>
DOI: 10.1007/s11356-017-0448-6

Volpe, M., Wüst, D., Merzari, F., Lucian, M., **Andreottola, G.**, Kruse, A., Fiori, L.
13003024100;55157182200;57003305800;57193665270;21233712800;16316292300;2173365
1900;

One stage olive mill waste streams valorisation via hydrothermal carbonisation

(2018) *Waste Management*, 80, pp. 224-234. Cited 14 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85053462181&doi=10.1016%2fj.wasman.2018.09.021&partnerID=40&md5=f4a4cdf9af226449b3086ed6cdcc9b62>

DOI: 10.1016/j.wasman.2018.09.021

Foladori, P., Petrini, S., Nessenzia, M., **Andreottola, G.**

23034249300;57201460119;57203528119;21233712800;

Enhanced nitrogen removal and energy saving in a microalgal-bacterial consortium treating real municipal wastewater

(2018) *Water Science and Technology*, 78 (1), pp. 174-182. Cited 9 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85052096008&doi=10.2166%2fwst.2018.094&partnerID=40&md5=5daaa9ad0745949b6506392bb545c37a>

DOI: 10.2166/wst.2018.094

Foladori, P., Petrini, S., **Andreottola, G.**

23034249300;57201460119;21233712800;

Evolution of real municipal wastewater treatment in photobioreactors and microalgae-bacteria consortia using real-time parameters

(2018) *Chemical Engineering Journal*, 345, pp. 507-516. Cited 23 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85044971221&doi=10.1016%2fj.cej.2018.03.178&partnerID=40&md5=551b3d7030e51a690ce23c38102dcb0d>

DOI: 10.1016/j.cej.2018.03.178

Langone, M., Soldano, M., Fabbri, C., Pirozzi, F., **Andreottola, G.**

55059630300;57191896209;14625911500;55883141700;21233712800;

Anaerobic Digestion of Cattle Manure Influenced by Swirling Jet Induced Hydrodynamic Cavitation

(2018) *Applied Biochemistry and Biotechnology*, 184 (4), pp. 1200-1218. Cited 4 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85030308987&doi=10.1007%2fs12010-017-2612-3&partnerID=40&md5=ef3a8404098484aa051aef4b01099d69>

DOI: 10.1007/s12010-017-2612-3

Ferrentino, R., Langone, M., Villa, R., **Andreottola, G.**

Strict anaerobic side-stream reactor: effect of the sludge interchange ratio on sludge reduction in a biological nutrient removal process (2017) *Environmental Science and Pollution Research*, 25(2), pp. 1243-12536

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85032662249&doi=10.1007%2fs11356-017-0448-6&partnerID=40&md5=b4d264f00fc397e3840e0ca2b6bd3bb9>

Langone, M., Soldano, M., Fabbri, C., Pirozzi, F., **Andreottola, G.**

Anaerobic Digestion of Cattle Manure Influenced by Swirling Jet Induced Hydrodynamic Cavitation (2017) *Applied Biochemistry and Biotechnology*, pp. 1-19. Article in Press.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85030548461&doi=10.1007%2fs12010->

017-2612-3&partnerID=40&md5=e2c816fa73e4d59ea079b9d657b5fba1

Mancuso, G., Langone, M., **Andreottola, G.**

A swirling jet-induced cavitation to increase activated sludge solubilisation and aerobic sludge biodegradability (2017) *Ultrasonics Sonochemistry*, 35, pp. 489-501. Cited 3 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85000631125&doi=10.1016%2fj.ultsonch.2016.11.006&partnerID=40&md5=2eb571cf283d6c52b673796c096a0213>

Langone, M., Ferrentino, R., Cadonna, M., **Andreottola, G.**

Stoichiometric evaluation of partial nitrification, anammox and denitrification processes in a sequencing batch reactor and interpretation of online monitoring parameters (2016)

Chemosphere, 164, pp. 488-498. Cited 1 time.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84985991744&doi=10.1016%2fj.chemosphere.2016.08.094&partnerID=40&md5=0af013ce2733eb2e3a764a41f80fcc7d>

Ferrentino, R., Langone, M., Gandolfi, I., Bertolini, V., Franzetti, A., **Andreottola, G.**

Shift in microbial community structure of anaerobic side-stream reactor in response to changes to anaerobic solid retention time and sludge interchange ratio (2016) *Bioresource Technology*, 221, pp. 588-597. Cited 5 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84988816828&doi=10.1016%2fj.biortech.2016.09.077&partnerID=40&md5=e69d13a16c55cb10520aa0cce260201f>

Mancuso, G., Langone, M., Laezza, M., **Andreottola, G.**

Decolourization of Rhodamine B: A swirling jet-induced cavitation combined with NaOCl (2016) *Ultrasonics Sonochemistry*, 32, pp. 18-30. Cited 6 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84958787143&doi=10.1016%2fj.ultsonch.2016.01.040&partnerID=40&md5=9af36c346dd5c42987afaeb9743aa144>

Velho, V.F., Foladori, P., **Andreottola, G.**, Costa, R.H.R.

Anaerobic side-stream reactor for excess sludge reduction: 5-year management of a full-scale plant (2016) *Journal of Environmental Management*, 177, pp. 223-230. Cited 4 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84963737150&doi=10.1016%2fj.jenvman.2016.04.020&partnerID=40&md5=b6bd81b83ef8df238dc3a6ebb860b3b7>

Ferrentino, R., Langone, M., Merzari, F., Tramonte, L., **Andreottola, G.**

A review of anaerobic side-stream reactor for excess sludge reduction: Configurations, mechanisms, and efficiency (2016) *Critical Reviews in Environmental Science and Technology*, 46 (4), pp. 382-405. Cited 7 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84958935589&doi=10.1080%2f10643389.2015.1096879&partnerID=40&md5=518d7b8b9366e3de3a113f46b27acba4>

Limoli, A., Langone, M., **Andreottola, G.**

Ammonia removal from raw manure digestate by means of a turbulent mixing stripping process (2016) *Journal of Environmental Management*, 176, pp. 1-10. Cited 4 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84971520485&doi=10.1016%2fj.jenvman.2016.03.007&partnerID=40&md5=92088118dcbcfb30>

ec641e3aa218d7ab

Foladori, P., Velho, V.F., Costa, R.H.R., Bruni, L., Quaranta, A., **Andreottola, G.**

Concerning the role of cell lysis-cryptic growth in anaerobic side-stream reactors: The single-cell analysis of viable, dead and lysed bacteria (2015) *Water Research*, 74, pp. 132-142. Cited 17 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84923283137&doi=10.1016%2fj.watres.2015.01.042&partnerID=40&md5=1c7ab42485d49646e39a23dabd36032b>

Langone, M., Ferrentino, R., Trombino, G., Waubert De Puiseau, D., **Andreottola, G.**, Rada, E.C., Ragazzi, M.

Application of a novel hydrodynamic cavitation system in wastewater treatment plants (2015) *UPB Scientific Bulletin, Series D: Mechanical Engineering*, 77 (1), pp. 225-234. Cited 5 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84926460510&partnerID=40&md5=248d13e7feeeac2fd30d64c344b935e1>

Brevetti

Peluso A. **Andreottola G.**, Foladori P., Menapace V. (2011) METODO E IMPIANTO PER LA RIDUZIONE DEI FANGHI PRODOTTI NEL PROCESSO DI DEPURAZIONE DELLE ACQUE (A method and a plant for reducing sludge produced in a water purification process). PROMINENT ITALIANA S.R.L. Brevetto nazionale N. ITMI20100187 del 09/08/2011. Brevetto internazionale N. EP2354096 del 10/08/2011.

Andreottola G., Vian M., Foladori P., Saroj D. (2010) Method for depuration of wastewaters with reduction of sludge production and plant thereof. Università degli Studi di Trento. Brevetto internazionale: WO 2010122500 A2 del 28/10/2010.

Andreottola G., Ferrentino R., Langone M. (2016) Impianto e metodo per la riduzione dei fanghi nel trattamento delle acque di scarico - UTN (University of Trento) System Brevetto italiano n. ITUA20162357A1 del 6/04/2016.

Trento, 28 aprile 2020

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