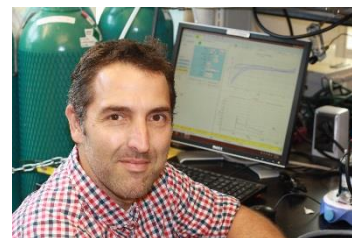


CURRICULUM VITAE



1. Personal

Postdoctoral research associate
Cornell Energy Institute
School of Biomolecular and Chemical Engineering
rp332@cornell.edu
https://jeff-tester.cbe.cornell.edu/people/roy_posmanik.html

2. Education and Additional Training

Dates	Description
2003–2006	B.Sc. in Biology at Tel-Aviv University, Faculty of Life Science.
2007–2009	M.Sc. (<i>Cum Laude</i>) in Desert Studies at Ben-Gurion University of the Negev, Albert Katz International School of Desert Studies (AKIS), Bluestein Institutes for Desert Research (BIDR), Water Resources Management program. Title of thesis: Development and Optimization of Field-Scale Bioreactor for the Production of N-rich Fertilizer aimed by Organic Agriculture. Supervised by: Prof. Amit Gross and Prof. Ali Nejdat.
2009–2013	Ph.D. in Desert Studies at Ben-Gurion University of the Negev, AKIS, BIDR. Title of thesis: Environmental Aspects Associated with Biowaste Management and Reuse. Supervised by: Prof. Amit Gross and Prof. Ali Nejdat.
2014–	Postdoctoral position at Cornell University, School of Chemical and Biomolecular Engineering, with Prof. Jeff Tester and Prof. Lars Angenent. Research subject: Integrating Anaerobic and Hydrothermal Treatment of Dairy and Food Biowastes: A Sustainable Systems Approach for Biofuel and Animal Feed Production and Nutrient Recovery.

4. Training and Teaching Experience

A. Academic teaching:

Dates	Description
2008–2014	Teaching assistant at Ben Gurion University of the Negev. Title of the course: Laboratory Methods for Environmental Studies. Taught by Prof. A. Gross
2015–	Teaching at Cornell University, CHEME 6661. Title of the course: Bioenergy and Biofuels Module. Co-taught with Prof. J. Tester, Prof. M. Moore and Dr. L. Gerber
2015–2016	Teaching at <i>Global Cornell Project</i> . Teaching and professional guidance for the support of Cornell students to design and built a bio-digester in an Indian rural community. The project was coordinated by Prof. Paulette Clancy and Prof. Julie Nucci
2016–	Teaching at Cornell University, CHEME 6660. Title of the course: Analysis of Sustainable Energy Systems. Co-taught with Prof. J. Tester and Prof. M. Moore

B. Co-advising graduate research students:

Dates	Student name	School/ Department	Main advisor
2014–2016	Joseph Usack	Biological and Environmental Engineering, Cornell University	Prof. L. Angenent
2015–	Borja Cantero	Chemical and Biomolecular Engineering, Cornell University	Prof. J. Tester
2016	Celia Martinez	Chemical Engineering, and Environmental Technology, University of Valladolid , Spain	Prof. M. Cocero

C. Advising undergraduate research students:

Dates	Student name	School/ Department
2014–	Andrew Kim	Civil and Environmental Engineering, Cornell University
2015–2016	Arnav Malkani	Chemical and Biomolecular Engineering, Cornell University
2016–	Isaac Cobitz	Chemical and Biomolecular Engineering, Cornell University

D. High school educational activities:

Dates	Description	School
2008–2013	High-School students' advisor for final research project (Matriculation)	Mevo'ot Hanegev Agricultural High School
2012–2013	High-School students' advisor for final research project (Matriculation)	Sede-Boquer's High School for Environmental Education

5. Activity in Scientific Journals

Dates	Journal and role
2014	Ecological Engineering; Reviewer
2014, 2015	Energy and Environmental Science; Reviewer
2015	Green Chemistry; Reviewer
2015	Industrial & Engineering Chemistry Research; Reviewer
2016	Journal of Supercritical Fluids; Reviewer

6. Activity in Scientific and Agricultural Committees

A. International:

Dates	Description and role
2014, 2015	Water Environment Research Foundation (WERF); Reviewer
2016	Binational Agricultural Research and Development (BARD); Reviewer
2016	Cornell Dairy Center of Excellence; Fellow

B. National:

Dates	Description and role
2014	The Chief Scientist Research Proposal Evaluation; Reviewer

7. Active Participation in Meetings

A. International:

Date	Title of the Meeting	Place	Role
2009	The 2 nd IWA Specialized Conference on Nutrient Management in Wastewater Treatment Processes	Krakow, Poland	Oral Presentation
2010	The 7 th ORBIT International Conference on Organic Resources in the Carbon Economy	Crete, Greece	Oral Presentation
2010	The 16 th European N-cycle meeting and workshop	Nijmegen, The Netherlands	Oral Presentation
2012	The 1 st international conference on nest construction and function	Lincoln, UK	Oral Presentation*
2012	The 4 th International Conference for Dryland, Desert and Desertification	Sede Boqer, Israel	Oral Presentation
2013	The 10 th IWA Specialized Conference on Biofiltration for Air Pollution Control	San-Francisco, CA	Oral Presentation
2014	The 5 th International Conference for Dryland, Desert and Desertification	Sede Boqer, Israel	Oral Presentation**

2015	The annual meeting of the Atkinson Center for sustainable Future	Ithaca, NY	Oral Presentation
2015	Dairy Environmental Systems and Climate Adaptation Conference	Ithaca, NY	Poster
2016	Food Waste-to-Low Carbon Energy Conference	New Brunswick, NJ	Oral Presentation
2016	Food Waste-to-Low Carbon Energy Conference	New Brunswick, NJ	Poster
2016	Cornell Dairy Center of Excellence Seminars	Ithaca, NY	Oral Presentation
2016	American Institute of Chemical Engineers (AIChE) Annual Meeting	San-Francisco, CA	Oral Presentation
2016	NYSAWWA/NYWEA Joint Energy Specialty Conference	Albany, NY	Oral Presentation
2016	NYSAWWA/NYWEA Joint Energy Specialty Conference	Albany, NY	Poster
2016	The 1 st International Conference for Bioenergy, Bioproducts & Environmental Sustainability	Sitges, Spain	TBA***
2016	The 1 st International Conference for Bioenergy, Bioproducts & Environmental Sustainability	Sitges, Spain	TBA***

*Given by Prof. A. Ar; **Given by Prof. A. Gross; TBD= to be announced

B. National:

Date	Title of the Meeting	Role
2006	The 43 rd meeting of the Israeli Zoological Society	Oral Presentation
2008	The Negev's 2 nd Conference for Green Agriculture	Poster
2009	The 37 th annual conference of the Israel Society of Ecology and Environmental Sciences	Poster
2010	The Annual Conference of the Israel Society of soil science	Oral Presentation
2011	The Annual Meeting of the Israel Society for Microbiology (ISM)	Poster
2012	The 40 th annual conference for Science and the Environment	Oral Presentation

8. Research Grants

A. International competitive grants:

Year	Granting Source	Duration (years)	Role*	Title (short)	Budget (US \$ / year)	
					Total	Researcher
2016**	USDA-NIFA-BARD	2	CI	Resource recovery from dairy waste streams	500,000	200,000
2016	Chilean Science Foundation	3	CI	Resource recovery and solid waste management system	250,000	-
2015	USDA-NIFA-AFRI	3	CI	Sustainable use of dairy farm anaerobic digestate.	75,000	37,500
2014	Atkinson Center for Sustainable Future	2	CI***	Bioenergy from dairy manure	120,000	-
2013	International Arid Land Consortium	1	CI	Integrated biochemical-hydrothermal treatment of poultry manure	7,500	3,750

*PI = Principal Investigator; CI = Cooperating Investigator

** Pending; *** Informal contribution to this grant on behalf of Prof. Jeff Tester (PI)

B. National competitive grants:

Year	Granting Source	Duration (years)	Role*	Title (short)	Budget (US \$ / year)	
					Total	Researcher
2015	Ministry of Agriculture and Rural Development	3	CI	Combined hydrothermal-biochemical treatment of poultry litter	21,000	-
2013	Ministry of Environmental Protection	3	CI**	Sustainable hydrothermal-biochemical treatment for poultry waste	37,000	-

*PI = Principal Investigator; CI = Cooperating Investigator

** Informal contribution to this grant on behalf of Prof. Amit Gross (PI)

C. Other funds:

Year	Granting Source	Duration (years)	Role*	Title (short)	Budget (US \$ / year)	
					Total	Researcher
2011	USDA International Science & Education Program	1	CI	Water Sustainability in Desert Agriculture	20,000	6,000

*PI = Principal Investigator; CI = Cooperating Investigator

9. Awards

Dates	Description
2007 – 2009	Blaustein Fellowship for Graduate Fellows.
2008-2013	Legacy Heritage Fund Fellowship
2009-2011	Molcho Fund Fellowship for Excellent Graduate Students.
2011	Nitrification Network Travel Grant.
2011-2013	Rieger Fellowship for Excellent Graduate Students.
2012-2014	Ramat-Negev Fellowship for Agricultural Research
2013-2014	Kreitman Fellowship for Postdoctoral Researchers
2014-2016	The BARD Postdoctoral Fellowship
2015	The Atkinson Center for Sustainable Future Award for Best Research Project

LIST OF PUBLICATIONS

Marks:

- | | |
|---|------------------------------|
| S | Student under my supervision |
| * | Equal contribution |

1. Articles in Reviewed Journals

1. **Posmanik, R.**, Bar-Sinay, B., Golan, R., Nejidat, A., Gross, A. (2011). Reuse of stabilized fowl manure as soil amendment and its implication on organic agriculture nutrition management. *Water, Air, & Soil Pollution* 216: 537–545. IF (5 years) 1.872; Rank Q2 (Environmental Engineering)
2. Gross, A., Guy, O., **Posmanik, R.**, Fine, P., Nejidat, A. (2012). A novel method for the combined biowaste stabilization and production of nitrate-rich liquid fertilizer for use in organic horticulture. *Water, Air, & Soil Pollution* 223: 1205–1214. IF (5 years) 1.872; Rank Q2 (Environmental Engineering)
3. **Posmanik, R.**, Bar-Sinay, B., Nejidat, A., Gross, A. (2013). Integrated biological treatment of fowl manure for nitrogen recovery and reuse. *Journal of Environmental Management* 117: 172–179. IF (5 years) 4.049; Rank Q1 (Environmental Engineering)
4. **Posmanik, R.**, Gross, A., Nejidat, A. (2014) Effect of high ammonia loads emitted from poultry manure digestion on nitrification activity and nitrifiers community structure in a compost biofilter. *Ecological Engineering* 62: 140–147. IF (5 years) 3.223; Rank Q1 (Environmental Engineering)
5. Kidron, J.G.*, **Posmanik, R.***, Brunner, T., Nejidat A. (2015). Spatial abundance of microbial nitrogen-transforming genes and inorganic nitrogen in biocrusts along a transect of an arid sand dune in the Negev Desert. *Soil Biology and Biochemistry* 83: 150–159. IF (5 years) 5.041; Rank Q1 (Soil Science)
6. Mau, V., Quance, J., **Posmanik R.**, Gross, A. (2016). Phases' characteristics of poultry litter hydrothermal carbonization under a range of process parameters. *Bioresource Technology* 219, 632–642. IF (5 years) 5.744; Rank Q1 (Environmental Engineering)
7. **Posmanik, R.**, Cantero, D.A., Malkani, A.^S, Sills, D.L., Tester, J.W. (2017) Biomass conversion to bio-oil using sub-critical water: study of model compounds for food processing waste. Accepted for publication in *Journal of Supercritical Fluids* 119, 26-35. IF (5 years) 2.782; Rank: Q1 (Chemical Engineering)

2. Articles under Review

8. **Posmanik, R.**, Nejdat, A., Dahan, O., Gross, A. Seasonal emissions of nitrous oxide from different irrigated desert soils amended with digested poultry manures. Submitted for publication in *Science of the Total Environment*.
9. Usack, J.G.^S, Gerber Van Doren, L., **Posmanik, R.**, Tester, J.W., Angenent, L.T. A technical evaluation of anaerobic co-digestion implementation on New York State dairy farms using an environomic life-cycle framework. Submitted for publication in *Applied Energy*.
10. Gerber Van Doren, L.*, **Posmanik, R.***, Tester, J.W., Sills, D.L., Prospects for heat recovery during biological and hydrothermal processing of biomass. Submitted for publication in *Bioresource Technology*.

3. Articles in Preparation

11. **Posmanik, R.**, Labatut, R., Kim, A.^S, Usack, J.G.^S, Tester, J.W., Angenent, L.T. Coupling hydrothermal liquefaction and anaerobic digestion for sustainable energy generation from food waste. To be submitted for publication in *Bioresource Technology*.
12. **Posmanik, R.**, Cantero, D., Martinez, C.M.^S, Cantero-Tubilla B.^S Angenent, L.T., Tester, J.W. Production of hydrocarbons and alcohols from high oxygenated biomass in subcritical water. To be submitted for publication in *Green Chemistry*.

4. Articles in Non-Reviewed Journals

1. **Posmanik, R.**, B. Bar Sinay, A. Nejdat and A. Gross (2009). Biological reactor for the production of N-rich liquid fertilizer for organic agriculture (In Hebrew). Yevul Si 46: 66–70.

5. Articles in Symposia Proceedings

1. **Posmanik, R.**, Bar-Sinay, B., Golan, R., Nejdat, A., Gross, A. (2009). Reuse of fowl manure sludge liquor as soil amendments - a component of organic agriculture nutrition management. In: *Proceedings of the 2nd IWA Specialized Conference on Nutrient Management in Wastewater Treatment Processes*, Krakow, Poland.
2. **Posmanik, R.**, Bar-Sinay, B., Nejdat, A., Gross, A. (2010). A novel biowaste management scheme for fowl manure utilization. In: *Proceedings of the 7th ORBIT International Conference on Organic Resources in the Carbon Economy*, Crete, Greece.

3. **Posmanik, R.**, Crohn, M.D., Walker, S.L., Nejidat, A., Gross, A. (2013). The effect of various poultry manure management practices on emissions of ammonia and nitrous oxide. In: *Proceedings of the 10th IWA Specialized Conference on Biofiltration for Air Pollution Control*, San-Francisco, CA.

6. Articles in Symposia (not followed by published proceedings):

4. **Posmanik, R.**, Shmueli, I., Ar, A. (2006). Brood patch coverage of eggshell surface in the Bankiva chicken (*Gallus gallus bankiva*). The 43rd meeting of the Israeli Zoological Society. Open University, Israel.
5. **Posmanik, R.**, Nejidat, A., Gross, A. (2008). Novel system for organic fertilizer production. The Negev's 2nd Conference for Green Agriculture. Gilat Research Center, Israel.
6. **Posmanik, R.**, Bar-Sinay, B., Golan, R., Nejidat, A., Gross, A. (2009). Development of a bioreactor for the production of N-rich liquid fertilizer for organic agriculture. The 37th Annual Conference of the Israel Society of Ecology and Environmental Sciences. Weizmann Institute, Israel.
7. **Posmanik, R.**, Bar-Sinay, B., Nejidat, A., Gross, A. (2010). Stabilization and reuse of agro biowaste as soil amendment. The Annual Conference of the Israel Society of soil science. Volcani Institute, Israel.
8. **Posmanik, R.**, Gross, A., Nejidat, A. (2011). Spatial distribution of ammonia oxidizers in a compost biofilter receiving volatilized ammonia from manure extracts. The Annual Meeting of the Israel Society for Microbiology (ISM). Bar-Ilan University, Israel.
9. **Posmanik, R.**, Gross, A., Nejidat, A. (2011). Production of nitrate-enriched fertilizer from fowl manure: Possible applications in organic agriculture. The 2nd International Conference on Nitrification and 16th European N-cycle meeting and workshop. Nijmegen, The Netherlands.
10. Ar, A., **Posmanik, R.**, Shmueli-Bauer, I., Rozenboim, I. (2012). The dynamic role of brood patch as part of the microclimate of the egg in the nest. The 1st International Conference on Nest Construction and Function. University of Lincoln, Lincoln, UK.

11. **Posmanik, R.**, Bar Sinay, B., Nejidat, A., Gross, A. (2012). Reuse of poultry manure sludge as an agricultural soil amendment. The 40th Annual Conference for Science and the Environment. Tel-Aviv University, Israel.
12. **Posmanik, R.**, B. Yee, S.S^S, Busgang, A.S^S, Nejidat, A., Gross, A. (2012). Agro-biowaste management scheme biosolids stabilization and reuse as amendment to arid agricultural soil. The 4th International Conference for Dryland, Desert and Desertification. Sede Boqer Campus, Israel.
13. **Posmanik, R.**, Gross, A. (2014) Onsite carbon and nutrients recovery from dairy manure waste in a rural desert farm by hybrid hydrothermal carbonization and gas biofiltration. The 5th International Conference for Dryland, Desert and Desertification. Sede Boqer Campus, Israel.
14. **Posmanik, R.**, Angenent, L.T., Usack, J.G.^S, Moore, M.C., Overton, T.R., Tester, J.W. (2015). Integrating anaerobic and hydrothermal treatment of dairy and food biowastes: a sustainable systems approach for biofuel and animal feed production and nutrient recovery. The Annual Meeting of Atkinson Center for sustainable Future (ACSF). Cornell University, Ithaca, NY.
15. **Posmanik, R.**, Angenent, L.T., Usack, J.G.^S, Moore, M.C., Overton, T.R., Tester, J.W. (2015). Coupling anaerobic digestion and hydrothermal liquifaction for sustainable energy generation and waste recovery in dairy operations. The Dairy Environmental Systems and Climate Adaptation Conference. Cornell University, Ithaca, NY.
16. **Posmanik R.**, Labatut R.A., Kim A.H. ^S, Usack J.G.^S, Tester J.W., Angenent L.T. (2016) Integrating hydrothermal liquefaction and anaerobic digestion for sustainable energy generation from food waste. Food Waste-to-Low Carbon Energy Conference, New Brunswick, NJ.
17. Usack J. G.^S, Gerber Van Doren L., **Posmanik R.**, Tester J. W., Angenent L. T. (2016) A life-cycle evaluation of food waste anaerobic co-digestion implementation on dairy farms. Food Waste-to-Low Carbon Energy Conference. New Brunswick, NJ.
18. Angenent L. T. Usack J.G.^S, Daly S.E, **Posmanik R.**, Tester J.W. (2016) Resource recovery from food waste: from storage to biorefineries. Food Waste-to-Low Carbon Energy Conference. New Brunswick, NJ.

19. **Posmanik R.**, Cantero D.A. Martinez C.M.^S. M. Cantero-Tubilla B.^S, Tester J. W. (2016) *SmartWaste*: biomass conversion into low oxygenated hydrocarbons in subcritical water. AIChE Annual Meeting. San-Francisco, CA.
20. Sills D.L., **Posmanik, R.**, Usack J.G.^S, Moore M.C., Overton T.R., Angenent L. T., Tester J. W. (2016) Process integration of anaerobic digestion and hydrothermal liquifaction for sustainable energy generation and waste recovery in dairy operations. NYSAWWA/NYWEA Joint Energy Specialty Conference. Albany NY.
21. **Posmanik, R.**, Gerber Van Doren L., Tester J.W., Sills D.L. (2016) Prospects for heat recovery and techno-economic analysis for energy generation using biological and hydrothermal processing of biomass. NYSAWWA/NYWEA Joint Energy Specialty Conference, Albany NY.
22. **Posmanik, R.**, Nejidat, A., Gross, A. (2016) N₂O emissions from irrigated soil amended with anaerobically digested animal waste. The 1st International Conference for Bioenergy, Bioproducts & Environmental Sustainability. Sitges, Spain.
23. **Posmanik R.**, Labatut R.A., Kim A.H.^S, Usack J.G.^S, Tester J.W., Angenent L.T. (2016) Coupling hydrothermal liquefaction and anaerobic digestion for energy valorization from food waste. The 1st International Conference for Bioenergy, Bioproducts & Environmental Sustainability. Sitges, Spain.