# Panagiotis G Kougias

List of Publications by Year
in descending order

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|---|---|---|---|
| 81 papers | 5,492 citations | 76294 40 h-index | 85498 71 g-index |
| 84 all docs | 84 docs citations | 84 times ranked | 4201 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Biogas upgrading and utilization: Current status and perspectives. Biotechnology Advances, 2018, 36, 452-466. | 6.0 | 885 |
| 2 | Biogas Upgrading via Hydrogenotrophic Methanogenesis in Two-Stage Continuous Stirred Tank Reactors at Mesophilic and Thermophilic Conditions. Environmental Science & Technology, 2015, 49, 12585-12593. | 4.6 | 287 |
| 3 | Ex-situ biogas upgrading and enhancement in different reactor systems. Bioresource Technology, 2017, 225, 429-437. | 4.8 | 249 |
| 4 | Metagenomic analysis and functional characterization of the biogas microbiome using high throughput shotgun sequencing and a novel binning strategy. Biotechnology for Biofuels, 2016, 9, 26. | 6.2 | 248 |
| 5 | Biogas and its opportunitiesâ€"A review. Frontiers of Environmental Science and Engineering, 2018, 12, 1. | 3.3 | 201 |
| 6 | In-situ biogas upgrading in thermophilic granular UASB reactor: key factors affecting the hydrogen mass transfer rate. Bioresource Technology, 2016, 221, 485-491. | 4.8 | 140 |
| 7 | New insights from the biogas microbiome by comprehensive genome-resolved metagenomics of nearly 1600 species originating from multiple anaerobic digesters. Biotechnology for Biofuels, 2020, 13, 25. | 6.2 | 136 |
| 8 | Deeper insight into the structure of the anaerobic digestion microbial community; the biogas microbiome database is expanded with 157 new genomes. Bioresource Technology, 2016, 216, 260-266. | 4.8 | 132 |
| 9 | Process performance and comparative metagenomic analysis during co-digestion of manure and lignocellulosic biomass for biogas production. Applied Energy, 2017, 185, 126-135. | 5.1 | 132 |
| 10 | Metagenomic binning reveals the functional roles of core abundant microorganisms in twelve full-scale biogas plants. Water Research, 2018, 140, 123-134. | 5.3 | 122 |
| 11 | Optimization of hydrogen dispersion in thermophilic up-flow reactors for ex situ biogas upgrading. Bioresource Technology, 2017, 234, 310-319. | 4.8 | 110 |
| 12 | Microbial diversity and dynamicity of biogas reactors due to radical changes of feedstock composition. Bioresource Technology, 2015, 176, 56-64. | 4.8 | 101 |
| 13 | Bioaugmentation with hydrolytic microbes to improve the anaerobic biodegradability of lignocellulosic agricultural residues. Bioresource Technology, 2017, 234, 350-359. | 4.8 | 91 |
| 14 | Metabolic dependencies govern microbial syntrophies during methanogenesis in an anaerobic digestion ecosystem. Microbiome, 2020, 8, 22. | 4.9 | 91 |
| 15 | Process performance and microbial community structure in thermophilic trickling biofilter reactors for biogas upgrading. Science of the Total Environment, 2019, 655, 529-538. | 3.9 | 85 |
| 16 | Novel ecological insights and functional roles during anaerobic digestion of saccharides unveiled by genome-centric metagenomics. Water Research, 2019, 151, 271-279. | 5.3 | 83 |
| 17 | Untangling the Effect of Fatty Acid Addition at Species Level Revealed Different Transcriptional Responses of the Biogas Microbial Community Members. Environmental Science & Technology, 2016, 50, 6079-6090. | 4.6 | 79 |
| 18 | Two-year microbial adaptation during hydrogen-mediated biogas upgrading process in a serial reactor configuration. Bioresource Technology, 2018, 264, 140-147. | 4.8 | 72 |

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|---|---|---|---|
| 19 | Spatial Distribution and Diverse Metabolic Functions of Lignocellulose-Degrading Uncultured Bacteria as Revealed by Genome-Centric Metagenomics. Applied and Environmental Microbiology, 2018, 84, . | 1.4 | 72 |
| 20 | Hybrid biogas upgrading in a two-stage thermophilic reactor. Energy Conversion and Management, 2018, 168, 1-10. | 4.4 | 71 |
| 21 | Mechanical pretreatment for increased biogas production from lignocellulosic biomass; predicting the methane yield from structural plant components. Waste Management, 2018, 78, 903-910. | 3.7 | 71 |
| 22 | Taxonomy of anaerobic digestion microbiome reveals biases associated with the applied high throughput sequencing strategies. Scientific Reports, 2018, 8, 1926. | 1.6 | 70 |
| 23 | New steady-state microbial community compositions and process performances in biogas reactors induced by temperature disturbances. Biotechnology for Biofuels, 2015, 8, 3. | 6.2 | 68 |
| 24 | Effect of organic loading rate and feedstock composition on foaming in manure-based biogas reactors. Bioresource Technology, 2013, 144, 1-7. | 4.8 | 66 |
| 25 | Hydrogen-Fueled Microbial Pathways in Biogas Upgrading Systems Revealed by Genome-Centric Metagenomics. Frontiers in Microbiology, 2018, 9, 1079. | 1.5 | 66 |
| 26 | Biogas production from ensiled meadow grass; effect of mechanical pretreatments and rapid determination of substrate biodegradability via physicochemical methods. Bioresource Technology, 2015, 182, 329-335. | 4.8 | 65 |
| 27 | Improving methane production from digested manure biofibers by mechanical and thermal alkaline pretreatment. Bioresource Technology, 2016, 216, 545-552. | 4.8 | 65 |
| 28 | Foam suppression in overloaded manure-based biogas reactors using antifoaming agents. Bioresource Technology, 2014, 153, 198-205. | 4.8 | 64 |
| 29 | A novel archaeal species belonging to Methanoculleus genus identified via de-novo assembly and metagenomic binning process in biogas reactors. Anaerobe, 2017, 46, 23-32. | 1.0 | 63 |
| 30 | Effect of feedstock composition and organic loading rate during the mesophilic co-digestion of olive mill wastewater and swine manure. Renewable Energy, 2014, 69, 202-207. | 4.3 | 60 |
| 31 | Microbial profiling during anaerobic digestion of cheese whey in reactors operated at different conditions. Bioresource Technology, 2019, 275, 375-385. | 4.8 | 59 |
| 32 | Anaerobic digestion foaming in full-scale biogas plants: a survey on causes and solutions. Water Science and Technology, 2014, 69, 889-895. | 1.2 | 58 |
| 33 | Dynamic functional characterization and phylogenetic changes due to Long Chain Fatty Acids pulses in biogas reactors. Scientific Reports, 2016, 6, 28810. | 1.6 | 58 |
| 34 | Simultaneous biogas upgrading and biochemicals production using anaerobic bacterial mixed cultures. Water Research, 2018, 142, 86-95. | 5.3 | 58 |
| 35 | Performance and genome-centric metagenomics of thermophilic single and two-stage anaerobic digesters treating cheese wastes. Water Research, 2018, 134, 181-191. | 5.3 | 56 |
| 36 | Counteracting foaming caused by lipids or proteins in biogas reactors using rapeseed oil or oleic acid as antifoaming agents. Water Research, 2015, 79, 119-127. | 5.3 | 52 |

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|---|---|---|---|
| 37 | Microbial community changes in methanogenic granules during the transition from mesophilic to thermophilic conditions. Applied Microbiology and Biotechnology, 2017, 101, 1313-1322. | 1.7 | 51 |
| 38 | Effect of micro-aeration and inoculum type on the biodegradation of lignocellulosic substrate. Bioresource Technology, 2017, 225, 246-253. | 4.8 | 47 |
| 39 | Co-digestion and model simulations of source separated municipal organic waste with cattle manure under batch and continuously stirred tank reactors. Energy Conversion and Management, 2018, 159, 1-6. | 4.4 | 46 |
| 40 | Mechanical pretreatment at harvesting increases the bioenergy output from marginal land grasses. Renewable Energy, 2017, 111, 914-921. | 4.3 | 44 |
| 41 | Anaerobic granular sludge for simultaneous biomethanation of synthetic wastewater and CO with focus on the identification of CO-converting microorganisms. Water Research, 2017, 126, 19-28. | 5.3 | 41 |
| 42 | Anaerobic Mono- and Co-digestion of Mechanically Pretreated Meadow Grass for Biogas Production. Energy & Fuels, 2015, 29, 4005-4010. | 2.5 | 40 |
| 43 | Environmental impacts of biogas production from grass: Role of co-digestion and pretreatment at harvesting time. Applied Energy, 2019, 252, 113467. | 5.1 | 40 |
| 44 | In-situ biogas upgrading process: Modeling and simulations aspects. Bioresource Technology, 2017, 245, 332-341. | 4.8 | 39 |
| 45 | Microbial activity response to hydrogen injection in thermophilic anaerobic digesters revealed by genome-centric metatranscriptomics. Microbiome, 2018, 6, 194. | 4.9 | 39 |
| 46 | Pilot-scale biomethanation in a trickle bed reactor: Process performance and microbiome functional reconstruction. Energy Conversion and Management, 2021, 244, 114491. | 4.4 | 39 |
| 47 | Microbial analysis in biogas reactors suffering by foaming incidents. Bioresource Technology, 2014, 167, 24-32. | 4.8 | 38 |
| 48 | Energy recovery from wastewater microalgae through anaerobic digestion process: Methane potential, continuous reactor operation and modelling aspects. Biochemical Engineering Journal, 2018, 139, 1-7. | 1.8 | 34 |
| 49 | Inoculum and zeolite synergistic effect on anaerobic digestion of poultry manure. Environmental Technology (United Kingdom), 2014, 35, 1219-1225. | 1.2 | 33 |
| 50 | Effect of substrates and intermediate compounds on foaming in manure digestion systems. Water Science and Technology, 2012, 66, 2146-2154. | 1.2 | 32 |
| 51 | Converting mesophilic upflow sludge blanket (UASB) reactors to thermophilic by applying axenic methanogenic culture bioaugmentation. Chemical Engineering Journal, 2018, 332, 508-516. | 6.6 | 30 |
| 52 | Antifoaming effect of chemical compounds in manure biogas reactors. Water Research, 2013, 47, 6280-6288. | 5.3 | 28 |
| 53 | Human waste anaerobic digestion as a promising low-carbon strategy: Operating performance, microbial dynamics and environmental footprint. Journal of Cleaner Production, 2020, 256, 120414. | 4.6 | 26 |
| 54 | Zeolite and swine inoculum effect on poultry manure biomethanation. International Agrophysics, 2013, 27, 169-173. | 0.7 | 25 |

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| 55 | Co-digestion of municipal waste biopulp with marine macroalgae focusing on sodium inhibition. Energy Conversion and Management, 2019, 180, 931-937. | 4.4 | 25 |
| 56 | Biogas Upgrading: Current and Emerging Technologies. , 2019, , 817-843. | | 24 |
| 57 | From renewable energy to sustainable protein sources: Advancement, challenges, and future roadmaps. Renewable and Sustainable Energy Reviews, 2022, 157, 112041. | 8.2 | 24 |
| 58 | Performance Evaluation of Mesophilic Anaerobic Digestion of Chicken Manure with Algal Digestate. Energies, 2018, 11, 1829. | 1.6 | 22 |
| 59 | Biological CO2 fixation in up-flow reactors via exogenous H2 addition. Journal of Biotechnology, 2020, 319, 1-7. | 1.9 | 22 |
| 60 | Ex-situ biogas upgrading in thermophilic up-flow reactors: The effect of different gas diffusers and gas retention times. Bioresource Technology, 2021, 340, 125694. | 4.8 | 22 |
| 61 | In-situ biogas upgrading assisted by bioaugmentation with hydrogenotrophic methanogens during mesophilic and thermophilic co-digestion. Bioresource Technology, 2022, 348, 126754. | 4.8 | 22 |
| 62 | Co-digestion of Laminaria digitata with cattle manure: A unimodel simulation study of both batch and continuous experiments. Bioresource Technology, 2019, 276, 361-368. | 4.8 | 19 |
| 63 | Valorization of household food wastes to lactic acid production: A response surface methodology approach to optimize fermentation process. Chemosphere, 2022, 296, 133871. | 4.2 | 18 |
| 64 | Ex-situ biogas upgrading in thermophilic trickle bed reactors packed with micro-porous packing materials. Chemosphere, 2022, 296, 133987. | 4.2 | 18 |
| 65 | Solutions for Foaming Problems in Biogas Reactors Using Natural Oils or Fatty Acids as Defoamers. Energy & Fuels, 2015, 29, 4046-4051. | 2.5 | 17 |
| 66 | Improving the energy balance of grass-based anaerobic digestion through combined harvesting and pretreatment. Anaerobe, 2017, 46, 131-137. | 1.0 | 17 |
| 67 | Microbial dynamics in biogas digesters treating lipid-rich substrates via genome-centric metagenomics. Science of the Total Environment, 2021, 778, 146296. | 3.9 | 17 |
| 68 | Modeling anesthetic times. Predictors and implications for short-term outcomes. Journal of Surgical Research, 2013, 180, 1-7. | 0.8 | 16 |
| 69 | Traumatic carotid artery dissection caused by bungee jumping. Journal of Vascular Surgery, 2007, 46, 1044-1046. | 0.6 | 14 |
| 70 | Characterization of the planktonic microbiome in upflow anaerobic sludge blanket reactors during adaptation of mesophilic methanogenic granules to thermophilic operational conditions. Anaerobe, 2017, 46, 69-77. | 1.0 | 14 |
| 71 | Anaerobic co-digestion of macroalgal biomass with cattle manure under high salinity conditions. Journal of Environmental Chemical Engineering, 2021, 9, 105406. | 3.3 | 13 |
| 72 | Thermophilic anaerobic digestion of olive mill wastewater in an upflow packed bed reactor: Evaluation of 16S rRNA amplicon sequencing for microbial analysis. Journal of Environmental Management, 2022, 301, 113853. | 3.8 | 13 |

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|---|---|---|---|
| 73 | In vitro fermentation of key dietary compounds with rumen fluid: A genome-centric perspective. Science of the Total Environment, 2017, 584-585, 683-691. | 3.9 | 12 |
| 74 | Evolution of the microbial community structure in biogas reactors inoculated with seeds from different origin. Science of the Total Environment, 2021, 773, 144981. | 3.9 | 12 |
| 75 | Valorization of palm oil mill wastewater for integrated production of microbial oil and biogas in a biorefinery approach. Journal of Cleaner Production, 2021, 296, 126606. | 4.6 | 11 |
| 76 | Optimization of supercritical carbon dioxide explosion for sewage sludge pre-treatment using response surface methodology. Chemosphere, 2022, 297, 133989. | 4.2 | 11 |
| 77 | Exploitation of Liquid Digestate as the Sole Nutrient Source for Floating Hydroponic Cultivation of Baby Lettuce (Lactuca sativa) in Greenhouses. Energies, 2021, 14, 7199. | 1.6 | 9 |
| 78 | Metagenomic insights into bioaugmentation and biovalorization of oily industrial wastes by lipolytic oleaginous yeast Yarrowia lipolytica during successive batch fermentation. Biotechnology and Applied Biochemistry, 2020, 67, 1020-1029. | 1.4 | 7 |
| 79 | Enhancing anaerobic digestion of agricultural residues by microaerobic conditions. Biomass Conversion and Biorefinery, 2019, , 1. | 2.9 | 6 |
| 80 | PERFORMANCE OF A COVERED CLOSED LOOP SHALLOW GEOTHERMAL GREENHOUSE HEATING SYSTEM. Acta Horticulturae, 2012, , 457-462. | 0.1 | 2 |
| 81 | IMPROVEMENT OF A HEAT PUMP COEFFICIENT OF PERFORMANCE USED IN GREENHOUSES. Acta Horticulturae, 2012, , 441-447. | 0.1 | 0 |