

Erminta Tsouko

A. Publications in peer-reviewed international scientific journals

Pilafidis, S., Tsouko, E., Sougleri, G., Gkatzionis, K., Ioannou, Z., Diamantopoulou, P., and Sarris, D. 2023. Submerged cultivation of selected macro-fungi to produce mycelia rich in β -glucans and other bioactive compounds, valorizing side streams of the food industry. *Carbon Resources Conversion*. <https://doi.org/10.1016/j.crcon.2023.09.002>

Sarris, D., Tsouko, E., Photiades, A., Tchakouteu, S., Diamantopoulou, P., and Papanikolaou, S. (2023). Growth Response of Non-Conventional Yeasts on Sugar-Rich Media: Part 2: Citric Acid Production and Circular-Oriented Valorization of Glucose-Enriched Olive Mill Wastewaters Using Novel *Yarrowia lipolytica* Strains. 11(9), 2243; <https://doi.org/10.3390/microorganisms11092243>

Tsouko, E., Pilafidis, S., Dimopoulou, M., Kourmentza, K., & Sarris, D. (2023). Bioconversion of underutilized brewing by-products into bacterial cellulose by a newly isolated *Komagataeibacter rhaeticus* strain: A preliminary evaluation of the bioprocess's environmental impact. *Bioresource Technology*, 129667.

Alexandri, M., Christaki, S., Gkatzionis, K., Mourtzinou, I., & Tsouko, E. (2023). Residual biomass from major aromatic and medicinal flora of the Mediterranean: Challenges towards sustainable integration into food systems within the circular bioeconomy. *Trends in Food Science & Technology*, 104123. <https://doi.org/10.1016/j.tifs.2023.104123>

Koukoumaki, D. I., Tsouko, E., Papanikolaou, S., Ioannou, Z., Diamantopoulou, P., & Sarris, D. (2023). Recent advances in the production of single cell protein from renewable resources and applications. *Carbon Resources Conversion*. <https://doi.org/10.1016/j.crcon.2023.07.004>

Tsouko, E., Tolia, E., & Sarris, D. (2023). Microbial Melanin: Renewable Feedstock and Emerging Applications in Food-Related Systems. *Sustainability*, 15(9), 7516.

Sarris, D., Tsouko, E., Kothri, M., Anagnostou, M., Karageorgiou, E., & Papanikolaou, S. (2023). Upgrading Major Waste Streams Derived from the Biodiesel Industry and Olive Mills via Microbial Bioprocessing with Non-Conventional *Yarrowia lipolytica* Strains. *Fermentation*, 9(3), 251.

Kumar, V., Lakkaboyana, S. K., Tsouko, E., Maina, S., Pandey, M., Umesh, M., & Yuzir, A. (2023). Commercialization potential of agro-based polyhydroxyalkanoates biorefinery: A technical perspective on advances and critical barriers. *International Journal of Biological Macromolecules*, 123733.

Tsouko, E., Papadaki, A., Carmona-Cabello, M., Dorado, M. P., Freire, D. M. G., Papanikolaou, S., & Koutinas, A. A. (2022). Bioconversion of Agro-Residues into Microbial Oil-Based Oleochemicals Employing Packed Bed Bioreactor. *Sustainability*, 14(21), 14135.

Michou, S., Tsouko, E., Vastaroucha, E. S., Diamantopoulou, P., & Papanikolaou, S. (2022). Growth Potential of Selected Yeast Strains Cultivated on Xylose-Based Media Mimicking Lignocellulosic Wastewater Streams: High Production of Microbial Lipids by *Rhodospiridium toruloides*. *Fermentation*, 8(12), 713.

Natsia, A., Tsouko, E., Pateraki, C., Efthymiou, M. N., Papagiannopoulos, A., Selianitis, D., & Koutinas, A. (2022). Valorization of wheat milling by-products into bacterial nanocellulose via ex-

situ modification following circular economy principles. *Sustainable Chemistry and Pharmacy*, 29, 100832.

Mavria, A., Tsouko, E., Protonotariou, S., Papagiannopoulos, A., Georgiadou, M., Selianitis, D., & Koutinas, A. A. (2022). Sustainable Production of Novel Oleogels Valorizing Microbial Oil Rich in Carotenoids Derived from Spent Coffee Grounds. *Journal of Agricultural and Food Chemistry*, 70(35), 10807-10817.

Efthymiou, M. N., Tsouko, E., Pateraki, C., Papagiannopoulos, A., Tzamalís, P., Pispas, S., & Koutinas, A. (2022). Property evaluation of bacterial cellulose nanostructures produced from confectionery wastes. *Biochemical Engineering Journal*, 108575.

Zioga, M., Tsouko, E., Maina, S., Koutinas, A., Mandala, I., & Evageliou, V. (2022). Physicochemical and rheological characteristics of pectin extracted from renewable orange peel employing conventional and green technologies. *Food Hydrocolloids*, 107887.

Efthymiou, M. N., Tsouko, E., Papagiannopoulos, A., Athanasoulia, I. G., Georgiadou, M., Pispas, S., & Koutinas, A. (2022). Development of biodegradable films using sunflower protein isolates and bacterial nanocellulose as innovative food packaging materials for fresh fruit preservation. *Scientific reports*, 12(1), 1-13.

Filippousi, R., Tsouko, E., Mordini, K., Ladakis, D., Koutinas, A. A., Aggelis, G., & Papanikolaou, S. (2022). Sustainable arabitól production by a newly isolated *Debaryomyces prosopidis* strain cultivated on biodiesel-derived glycerol. *Carbon Resources Conversion*, 5(1), 92-99.

Tsouko, E., Papadaki, A., Papanikolaou, S., Danezis, G. P., Georgiou, C. A., Freire, D. M., & Koutinas, A. (2021). Enzymatic production of isopropyl and 2-ethylhexyl esters using γ -linolenic acid rich fungal oil produced from spent sulphite liquor. *Biochemical Engineering Journal*, 169, 107956

Tsouko, E., Maina, S., Ladakis, D., Kookos, I. K., & Koutinas, A. (2020). Integrated biorefinery development for the extraction of value-added components and bacterial cellulose production from orange peel waste streams. *Renewable Energy*, 160, 944-954.

Tsouko, E., Papadaki, A., Papapostolou, H., Ladakis, D., Natsia, A., Koutinas, A., & Kopsahelis, N. (2020). Valorization of Zante currant side-streams for the production of phenolic-rich extract and bacterial cellulose: a novel biorefinery concept. *Journal of Chemical Technology & Biotechnology*, 95(2), 427-438.4.

Carmona-Cabello, M., García, I. L., Papadaki, A., Tsouko, E., Koutinas, A., & Dorado, M. P. (2020). Biodiesel production using microbial lipids derived from food waste discarded by catering services. *Bioresource Technology*, 124597.

Tsouko, E., Alexandri, M., Vieira Fernandes, K., Guimarães Freire, D. M., Mallouchos, A., & Koutinas, A. A. (2019). Extraction of phenolic compounds from palm oil processing residues and their application as antioxidants. *Food technology and biotechnology*, 57(1), 29-38.

Andritsou, V., De Melo, E. M., Tsouko, E., Ladakis, D., Maragkoudaki, S., Koutinas, A. A., & Matharu, A. S. (2018). Synthesis and characterization of bacterial cellulose from citrus-based sustainable resources. *ACS omega*, 3(8), 10365-10373

Tsouko, E., Kachrimanidou, V., Dos Santos, A. F., Lima, M. E. D. N. V., Papanikolaou, S., de Castro, A. M., & Koutinas, A. A. (2017). Valorization of by-products from palm oil mills for the production of generic fermentation media for microbial oil synthesis. *Applied biochemistry and biotechnology*, 181(4), 1241-1256.

Paximada, P., Tsouko, E., Kopsahelis, N., Koutinas, A. A., & Mandala, I. (2016). Bacterial cellulose as stabilizer of o/w emulsions. *Food hydrocolloids*, 53, 225-232.

Paximada, P., Dimitrakopoulou, E. A., Tsouko, E., Koutinas, A. A., Fasseas, C., & Mandala, I. G. (2016). Structural modification of bacterial cellulose fibrils under ultrasonic irradiation. *Carbohydrate polymers*, 150, 5-12.

Panagopoulou, E., Tsouko, E., Kopsahelis, N., Koutinas, A., Mandala, I., & Evageliou, V. (2015). Olive oil emulsions formed by catastrophic phase inversion using bacterial cellulose and whey protein isolate. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 486, 203-210.

Tsouko, E., Kourmentza, C., Ladakis, D., Kopsahelis, N., Mandala, I., Papanikolaou, S., & Koutinas, A. (2015). Bacterial cellulose production from industrial waste and by-product streams. *International journal of molecular sciences*, 16(7), 14832-14849.

B. Book chapter

Tsouko, E., Maina, S., Alexandri, M., Papapostolou, H., Koutinas, A. (2023) Recovery of Value-Added Products and Biological Conversion of Coffee and Citrus Processing Waste Using Green Technologies, In book: *Green Chemistry in Agriculture and Food Production*. Taylor Francis Group <https://doi.org/10.1201/9780429289538-7>

Efthymiou, M. N., Tsouko, E., Vlasi, E., Papagiannopoulos, A., Koutinas, A., & Pispas, S. (2022). Bio-based and Nanostructured Hybrids for Green and Active Food Packaging. In *Bio-and Nano-sensing Technologies for Food Processing and Packaging* (pp. 81-128). Royal Society of Chemistry.

Selianitis, D., Efthymiou, M. N., Tsouko, E., Papagiannopoulos, A., Koutinas, A., & Pispas, S. (2022). Nanocellulose Production from Different Sources and Their Self-Assembly in Composite Materials. In *Handbook of Nanocelluloses: Classification, Properties, Fabrication, and Emerging Applications* (pp. 1-32). Cham: Springer International Publishing

Alexandri M., Maina S, Tsouko E, Papapostolou H, Koutinas A, Kourmentza K. (2021). Valorization of fruit processing by-product streams into integrated biorefinery concepts: Extraction of value-added compounds and bioconversion to chemicals. In *Valorization of Agri-Food Wastes and By-Products*, Academic Press

Tsouko, E., Papanikolaou, S., & Koutinas, A. A. (2016). Production of fuels from microbial oil using oleaginous microorganisms. In *Handbook of Biofuels Production* (pp. 201-236). Woodhead Publishing

C. Conferences (national and international)

Pilafidis, S., Poultourtzidis, T., Papagiannopoulos, A., Pispas, S., Dimopoulou, M., Sarris, D. and Tsouko, E. (Virtual Oral presentation by Pilafidis). 2023. Development of a novel rotary disk bioreactor for sustainable bacterial cellulose production using waste derived from the food industry, International Sustainable Resource Recovery Strategies Towards Zero Waste (FULLRECO4US). September, 13–15, Istanbul, Turkey

Sarris, G., Pilafidis, S., Papagiannopoulos, A., Pispas, S., Sarris, D. and Tsouko, E. (Virtual Oral presentation by Tsouko). 2023. Wine distillery effluents valorization to produce bacterial cellulose and effect of phenolic compounds on the fermentation efficiency, International Sustainable Resource Recovery Strategies Towards Zero Waste (FULLRECO4US). September, 13–15, Istanbul, Turkey

Pilafidis, S., Dimopoulou, M., Kourmentza, K., Sarris, D. and Tsouko, E. (Virtual Oral presentation by Pilafidis). 2023. Bioconversion of brewer's spent grain into bacterial cellulose by a newly isolated *Komagataeibacter rhaeticus* strain and evaluation of the bioprocess's environmental impact, International Conference on Science and Technology of Advanced Materials (STAM23). April, 18-20, Kerala, India.

Tsouko, E. (Virtual Oral presentation by Tsouko). 2023. Bacterial cellulose: renewable resources, production systems, emerging applications in food packaging and environmental impact. International Conference on Science and Technology of Advanced Materials (STAM23). April, 18-20, Kerala, India.

Pilafidis, S., Tsouko, E., Sougleri, G., Diamantopoulou, P., Gkatzionis, K., Vasilakis, G., Papanikolaou, S., Sarris, D. (Oral presentation by Pilafidis). 2022. Production of fungal bioactive compounds utilizing agro-industrial side streams by selected edible macrofungi", 10th Panhellenic Conference of the Greek lipid forum. November, 25 Athens, Greece.

Kothri, M., Tsouko, E., Chatzigeorgiadis, G., Pilafidis, S., Vasilakis, G., Papanikolaou, S., Ioannou, Z., Gkatzionis, K., Sarris, D. (Oral presentation by Kothri). 2022. Valorization of brewer's spent grain for the production of single cell oil by the oleaginous yeast *Yarrowia lipolytica*, 10th Panhellenic Conference of the Greek lipid forum. November, 25 Athens, Greece.

Tsouko, E., Pilafidis, S., Giannakou, E., Dimopoulou, M., Kourmentza, K., Sarris, D. (Virtual Oral presentation by Tsouko). 2022. Bacterial cellulose production by a newly isolated *Komagataeibacter rhaeticus* strain valorizing waste streams derived from the brewery industry, 4th MEDFORUM. December, 4-7 Chania, Greece.

Pilafidis, S., Tsouko, E., Sougleri, G., Giannakou, E., Diamantopoulou, P., Ioannou, Z., Sarris, D. (Oral presentation by Pilafidis). 2022. Beta-glucans production by *Pleurotus ostreatus* and *Morchella esculenta* cultivated on various agroresidues under submerged cultures, 4th MEDFORUM. December, 4-7 Chania, Greece.

Pilafidis S, Sougleri G, Tsouko E, Diamantopoulou P, Gkatzionis K, Ioannou Z, Sarris D. 2022. (Oral presentation by Pilafidis). "Treatment and valorization of agro-industrial waste streams by edible and medicinal fungi: production of mycelial mass under submerged agitated cultures", 30th International Conference of FFC-18th International Symposium of ASFFBC. September 23-25. Lemnos (Myrina), Greece.

Penoglou G, Kotrotsiou O, Bakola V, Pavlou A, Sarafidou M, Ladakis D, Tsouko E, Koutinas A, Papapetros K.T, Andrikopoulos K.S, Voyiatzis G.A, Bartzialis D, Danalatos N.G, Giannoulis K.D, Karagiannidis E, Iakovlev M, Deze E, Papaioannou M, Sideri S, Kiparissides C. 2022. "Production and Application of High-Performance Industrial Materials based on Nanocellulose", 1st International Conference on Sustainable Chemical and Environmental Engineering. 31st August to 4th September. Crete (Rethymno), Greece.

Efthymiou M.N, Pateraki C, Tsouko E, Psilogiannopoulou E, Argiti C, Loukopoulos P, Selianitis D, Papagiannopoulos A, Tzamalís P, Pispas S, Bethanis K, Mantala I, Koutinas A. (Virtual Oral presentation by Efthymiou). 2021. "Bacterial cellulose synthesis through circular oriented bioprocesses using confectionary wastes and production of nanocellulose materials", 8th International Conference on Sustainable Solid Waste Management. June, 23-26 Thessaloniki, Greece.

Efthymiou M. N, Tsouko E, Papagiannopoulos A, Selianitis D, Athanasoulia I.J, Georgiadou M, Pispas S, Briassoulis D, Tsironi T, and Koutinas A. (Virtual Oral presentation by Efthymiou). 2021. "Biodegradable edible films in food packaging using sunflower protein isolates and bacterial nanocellulose", 5th EuChemS European Conference on Green and Sustainable Chemistry (5th EuGSC), 26 –29 September 2021, Greece.

Mavria A, Tsouko E, Papagiannopoulos A, Protonotariou S, Georgiadou M, Pispas S, Mandala I and Koutinas A. (Virtual Oral presentation by Tsouko). 2021. "Sustainable production of novel oleogels employing rich in carotenoids microbial oil derived from spent coffee grounds", 5th EuChemS European Conference on Green and Sustainable Chemistry (5th EuGSC), 26 –29 September 2021, Greece.

Anagnostopoulou E, Kalantzi O, Tsouko E, Kallithraka S, Papanikolaou S. (Virtual Poster presentation by Anagnostopoulou). 2021. ' 'Effect of culture conditions on the physiological behavior of *Saccharomyces cerevisiae* FMCC Y-54 growing on glucose in batch experiments' ', 9th Panhellenic Conference of Greek Lipid Forum "Current Trends in the Field of Lipids", 22 October 2021, Greece.

Anagnostopoulou E, Tsouko E, Maina S, Myrtsi E. D, Haroutounian S, Papanikolaou S, and Koutinas A. (Virtual Poster presentation by Anagnostopoulou). 2021. ' 'Combined microwave assisted pretreatment and enzymatic hydrolysis for spent coffee grounds valorization to produce microbial oil and valuable carotenoids' ', 9th Panhellenic Conference of Greek Lipid Forum "Current Trends in the Field of Lipids", 22 October 2021, Greece.

Maina S., Tsouko E., Koutinas A. (Oral presentation by Maina). 2019. Biorefinery development using spent coffee grounds for the production of bacterial cellulose and value-added products. ECAB5 5th European Congress of Applied Biotechnology. September, 15-19, Florence, Italy.

Tsouko E, Papadaki A, Papanikolaou S, Koutinas A. (Oral presentation by Tsouko). 2019. Microbial oil production using hemicellulose hydrolysate as feedstock. ECAB5 5th European Congress of Applied Biotechnology. September, 15-19, Florence, Italy.

Tsouko E., Maina S, Koutinas A. (Oral presentation by Tsouko). 2019. Integrated biorefinery approach for the valorisation of orange waste via the recovery of value-added products and bacterial cellulose production. BIOSpectrum 2019 International Conference on Advances in Food and Industrial Biotechnology. November 24-26, Thiruvalla, Kerala, India.

Tsouko E., Papadaki A, Koutinas A. (Oral presentation by Tsouko). 2019. Microbial lipids rich in polyunsaturated fatty acids for isopropyl and 2-ethylhexyl esters production via enzymatic catalysis. NHBT New Horizons in Biotechnology. November 20-24, Trivandrum, Kerala, India.

Tsouko E., Maina S, Koutinas A. (Oral presentation by Tsouko). 2019. Integrated biorefinery development: Valorisation of orange peels for the production of bacterial cellulose and various value-added products. HERAKLION 2019, 7th International Conference on Sustainable Solid Waste Management, June 26-29, Heraklion, Greece.

Maina S, Tsouko E, Koutinas A. (Oral presentation by Maina). 2019. Sustainable valorization of spent coffee grounds through an integrated biorefinery concept incorporating the production of 2,3-butanediol and value-added materials. BIOSpectrum 2019 International Conference on Advances in Food and Industrial Biotechnology. November 24-26, Thiruvalla, Kerala, India.

Tsouko E., Papadaki A, Freire D. M. G, Koutinas A. (Oral presentation). 2019. Bioprocess development for biolubricant production using microbial lipids derived via solid state fermentation of protein rich side streams. 8th International Forum on Industrial Bioprocessing 2019 (IBA-IFIBIOP 2019), May 1-5, Sarawak, Malaysia.

Tsouko E, Papadaki A, Koutinas A. (Oral presentation by Tsouko). 2019. Polyol esters and medium chain fatty acid esters synthesis as novel application of microbial oil produced from renewable resources. The International Graduate Symposium on Industrial Biotechnology. October 13-16, Jiangnan University, Wuxi, Jiangsu, China.

Efthymiou M.N, Tsouko E, Pateraki C, Koutinas A. 2019. (Oral presentation by Eythimiou) "Sunflower meal based biorefinery for the production of bacterial cellulose and value-added co-products", The International Graduate Symposium on Industrial Biotechnology. October 13-16, Jiangnan University, Wuxi, Jiangsu, China.

Tsouko E., Papadaki A, Koutinas A. (Oral presentation by Tsouko). 2018. Microbial oil production rich in γ -linolenic acid and its application for isopropyl and 2-ethylhexyl esters. 4-CIAB 4th Iberoamerican Congress on Biorefineries. October 24-26, Jaen, Spain.

Carmona-Cabello M., Il Garcia, Tsouko E., Papadaki A., Koutinas A. and Pilar Dorado M. (Oral presentation by Carmona). 2018. Valorization of food-industry wastes through a biodiesel biorefinery approach. 4-CIAB 4th Iberoamerican Congress on Biorefineries. October 24-26, Jaen, Spain.

Natsia A., E. Tsouko, E. Sigianis, D. Ladakis, A. Papadaki, E. Eriotou, A. Kampioti, N. Kopsahelis (Poster presentation). 2018. Bacterial cellulose production utilizing Zante currants' side-streams: A preliminary novel biorefinery concept, 6th International Conference on Sustainable Solid Waste Management, June 13-16, Naxos, Greece.

Tsouko, E., Alexandri, M., Vieira, K., Freire, D. M. G., Sousa, H. and Koutinas, A. A. (oral presentation by Tsouko) 2017. Extraction of phenolic compounds from palm oil processing residues and application of the crude extracts on sunflower oil. 12th International Conference on Sustainable Development of Energy, Water and Environment Systems, 4-8 October, Dubrovnik, Croatia.

Filippi, K., Filippousi, R., Tsouko, E., Ladakis D., Koutinas A., Papanikolaou, S. (poster presentation) 2017. High production of arabitol by *Debaryomyces hansenii* EMBT Y-41 cultivated

on low-cost hydrophilic carbon sources 12th International Conference on Sustainable Development of Energy, Water and Environment Systems, 4-8 October, Dubrovnik, Croatia.

Carmona-Cabello, M., Tsouko, E., Papadaki, A., Garcia, I. L., Pinzi, S., Leiva-Candia D., Koutinas, A. and Dorado M. P. (poster presentation) 2016. The concept of biorefineries. Valorisation of food waste from restaurants. 6th International Conference on Engineering for Waste and Biomass Valorisation, May 23-26, Albi, France.

Chrysanthi Pateraki, C., Kachrimanidou, V., Maina, S., Papadaki, A., Tsouko, E., Kopsahelis, N., Papanikolaou, S., Koutinas, A.A. (oral presentation) 2016. Effect of nutrient supplements derived from various industrial waste and by-product streams on succinic acid production via fermentation. 12th International Conference on Renewable Resources and Biorefineries, 30-31 May & 1 June, Ghent, Belgium.

Tsouko E., Kourmentza C., Ladakis D., Kopsahelis N., Mandala I., Papanikolaou S., Paloukis F., Alves V. and Koutinas A. A. (poster presentation) 2015. Biosynthesis and analysis of the properties of bacterial cellulose produced by industrial waste and by-product streams. Societal impacts of food waste valorisation, Workshop and Exhibition, August 5-6, Expo Cnr Milan, Italy.

Tsouko E., Ladakis D., Kopsahelis N., Kourmentza C., Mandala I., Papanikolaou S. and Koutinas A.A. (oral presentation by Tsouko) 2015. Utilisation of food wastes and biodiesel industry by-products for Bacterial Cellulose production. International Conference: Industrial Waste and Wastewater Treatment and Valorisation, May 21-23, Athens, Greece

Tsouko E., Kopsahelis N., Ladakis D., Papanikolaou S., Mandala I., Kookos K. I., and Koutinas A. A. (poster presentation) 2014. Production of bacterial cellulose by *Komagataeibacter sucrofermentans* DSM 15973 using renewable resources. 3rd International ISEKI: Food science and technology excellence for a sustainable bioeconomy, May 21-23, Athens, Greece