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Expertise

Giovanni Esposito is Assistant Professor of Sanitary and Environmental Engineering. In 2002 he received a 1-year Marie Curie fellowship to carry out part of his PhD activities at the University of Wageningen (NL). In 2004 he obtained his PhD degree in Hydraulic and Environmental Engineering at the University of Naples *Federico II*. Since 2009 he is Coordinator of the international Erasmus Mundus Joint Doctorate Programme in Environmental Technologies for Contaminated Solids, Sites and Sediments (EteCoS³).

His main expertise is in anaerobic biological processes for wastewater and solid waste treatment with particular focus on mathematical modelling.

Key papers related to the COST action

1. **Esposito G.**, Frunzo L., Panico A., d'Antonio G. (2008). *Mathematical Modelling of Disintegration-Limited Co-Digestion of OFMSW and Sewage Sludge*. *Water Science & Technology*, 58(7), 1513–1519.
2. **Esposito G.**, Lens P., Pirozzi F. (2009). *User-friendly mathematical model for the design of sulfate reducing H₂/CO₂ fed bio-reactors*. *Journal of Environmental Engineering*, 135(3), 167-175.
3. **Esposito G.**, Frunzo L., Panico A., Pirozzi F. (2011). *Modelling the effect of the OLR and OFMSW particle size on the performances of an anaerobic co-digestion reactor*. *Process Biochemistry* (2011), 46(2), 557-565.
4. **Esposito G.**, Frunzo L., Panico A., Pirozzi F. (2011). *Model calibration and validation for OFMSW and sewage sludge co-digestion reactors*. *Waste Management*, 31(12), 2527-35.
5. D'Acunto B., **Esposito G.**, Frunzo L., Pirozzi F. (2011). *Dynamic modeling of sulfate reducing biofilms*. *Computers & Mathematics with Applications*, 62(6), 2601-2608.
6. **Esposito G.**, Frunzo L., Giordano A., Liotta F., Panico A., Pirozzi F. (2012). *Anaerobic co-digestion of organic wastes*. *Reviews in Environmental Science and Bio/technology*, 11(4), 325-341.
7. Frunzo L., **Esposito G.**, Lens P., Pirozzi F. (2012). *Dynamic mathematical modelling of sulfate reducing gas-lift reactors*. *Process Biochemistry*, 47(12), 2172-2181.
8. Mussoline, W., **Esposito G.**, Lens P., Garuti G., Giordano A. (2012). *Design considerations for a farm-scale biogas plant based on pilot-scale anaerobic digesters loaded with rice straw and piggery wastewater*. *Biomass and Bioenergy*, 46, 469-478.
9. Mussoline W., **Esposito G.**, Giordano A., Lens P. (2013). *The anaerobic digestion of rice straw: A review*. *Critical Reviews in Environmental Science and Technology*, 43(9), 895-915.
10. Mussoline W., **Esposito G.**, Lens P., Spagni A., Giordano A. (2013). *Enhanced methane production from rice straw co-digested with anaerobic sludge from pulp and paper mill treatment process*. *Bioresource technology*, 148, 135-143.
11. Liotta F., d'Antonio G., **Esposito G.**, Fabbricino M., Frunzo L., van Hullebusch E., Lens P., Pirozzi F. (2014). *Effect of moisture on disintegration kinetics during anaerobic digestion of complex organic substrates*. *Waste Management & Research*, 32(1), 40-48.