

International Congress and Expo on Biofuels & Bioenergy August 25-27, 2015 Valencia, Spain

Biochemical methane potential of *Ulva* spp. seaweed biorefinery residues

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Seaweeds (macroalgae) have been recently attracting more and more interest as a third generation feedstock for bioenergy and biofuels. However, several barriers impede the deployment of competitive seaweed-derived energy. The high cost associated to seaweed farming and harvesting as well as their seasonal availability and biochemical composition currently make macroalgae exploitation too expensive for energy production only. Recent studies have indicated a possible solution may lay in seaweed integrated biorefinery, in which a bioenergy and/or biofuel production step ends an extractions cascade of highvalue chemicals. This results in the double benefit of producing renewable energy while adopting a zero waste approach, as fostered by recent EU societal challenges. This study investigates the biogas potential of residues from *Ulva* spp. seaweed after biorefinery extractions, which resulted close to raw un-extracted seaweed.

Biography

Silvia Tedesco is a Lecturer and Researcher at Dublin City University. She finished her IRCSET sponsored PhD in 2013, and currently is Co-principal Investigator of two research grants on biogas generation, funded by Enterprise Ireland and SFI. Her research interests involve seaweed-based biorefinery, biogas production, biomethane upgrade and CHP generation.

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