

Challenge to incorporate bio-oil into sustainable marine fuels by direct mixture with fossil fractions.

Abstract:

The market of Sustainable Marine Fuels (SMF) is continuously growing and need to be adapted to renewable fuels and guarantee net-zero GHG emissions and a circular economy by 2050. One of the most appropriate ways to help the energy transition at short and middle terms in marine transport is the use of biofuels come from bio-based waste. Pyrolysis and HTL technologies allow to transform the organic waste like agricultural or forestry residues and bio-wastes in bio-based oil fractions which are a high potential to produce SMF. In the case of bio-oil produce by pyrolysis, the challenges for its partial incorporation into fossil mixtures are associate to high number of oxygenated compounds which makes its physical-chemical properties incompatibles with a heavy fossil fuel and makes it difficult to accomplish the current regulatory requirements.