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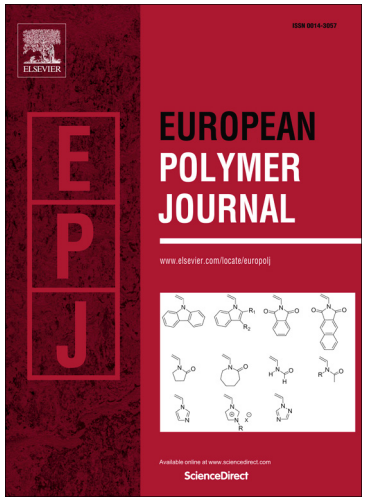

Polycaprolactone-based scaffold for oil-selective sorption and improvement of bacteria activity for bioremediation of polluted water

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Subheading: Porous PCL system obtained by leaching melt mixed PCL/PEG/NaCl composites: oil uptake performance and bioremediation efficiency

Roberto Scaffaro[*1], Francesco Lopresti[1], Valentina Catania[2], Santina Santisi[3], Simone Cappello[3], Luigi Botta[1], and Paola Quatrini[2]

[1] Department of Civil, Environmental, Aerospace and Materials Engineering University of Palermo, RU INSTM of Palermo, Viale delle Scienze, blg. 6, 90128 Palermo

[2]Dept. of Biological, Chemical and Pharmaceutical Sciences and Technologies (STEBICEF), University of Palermo, Viale delle Scienze, blg. 16, 90128 Palermo, Italy

[3]Institute for Coastal Marine Environment (IAMC) – CNR of Messina, Spianata San Raineri, 86, 98121 Messina, Italy

*Corresponding Author. Mail: roberto.scaffaro@unipa.it . Tel: +39.09123863723

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ABSTRACT

A novel floatable and biodegradable sponge for the selective absorption of oil from water and potentially useful as cell carrier for bioremediation treatments was prepared in polycaprolactone (PCL). The eco-friendly process for fabricating the PCL sponge does not involve either synthetic routes or organic solvents, thus minimizing environmental hazard. In particular, the 3D porous materials have been prepared by mixing in the melt the polymer matrix with two water-soluble