



Università di Camerino

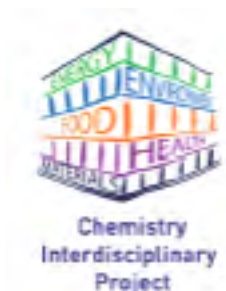
International School of Advanced Studies

PhD area "Chemical and Pharmaceutical Sciences
and Biotechnology"

Camerino **Friday 27 January 2023**

ore 15:00 – ChIP Conference Room

Chemistry Interdisciplinary Project (ChIP) - Via Madonna delle Carceri



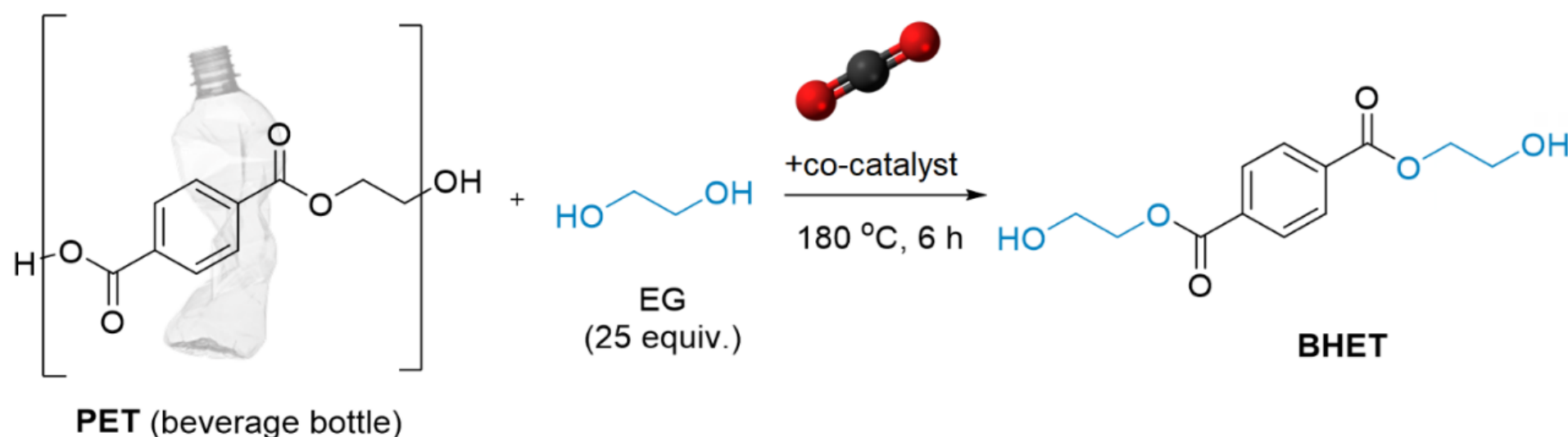
SEMINAR



Prof. Gianluca Ciancaleoni

University of Pisa

Carbon dioxide as a catalyst for polymer upcycling



The impressive amount of plastic items discarded every year poses a great challenge for our environment. Nowadays most of the recycling procedures are thermo-mechanic, with many drawbacks and limitations, but a new kind of approach (the chemical upcycling) is gaining interest as a viable alternative. In this seminar, the depolymerization of polyethylene terephthalate (PET) and polyamides (Nylon 6,6) will be presented, using CO₂ as a non-conventional, traceless and non-toxic catalyst or co-catalyst. Computational studies will be used to propose a reasonable reaction mechanism, along with a detailed characterization of the transition states.