

ARTICLE

Simultaneous CO₂ reduction and NADH regeneration using formate and glycerol dehydrogenase enzymes co-immobilized on modified natural zeolite

Received 00th January 20xx,
Accepted 00th January 20xx

Clarissa Cocuzza^a, Giuseppe Pietricola^a, Ilaria Zonca^a, Melodj Dosa^a, Oscar Romero^c, Tonia Tommasi^a, Valentina Cauda^a, Debora Fino^a, Carminna Ottone^{†b} and Marco Piumetti^{*a}

DOI: 10.1039/x0xx00000x

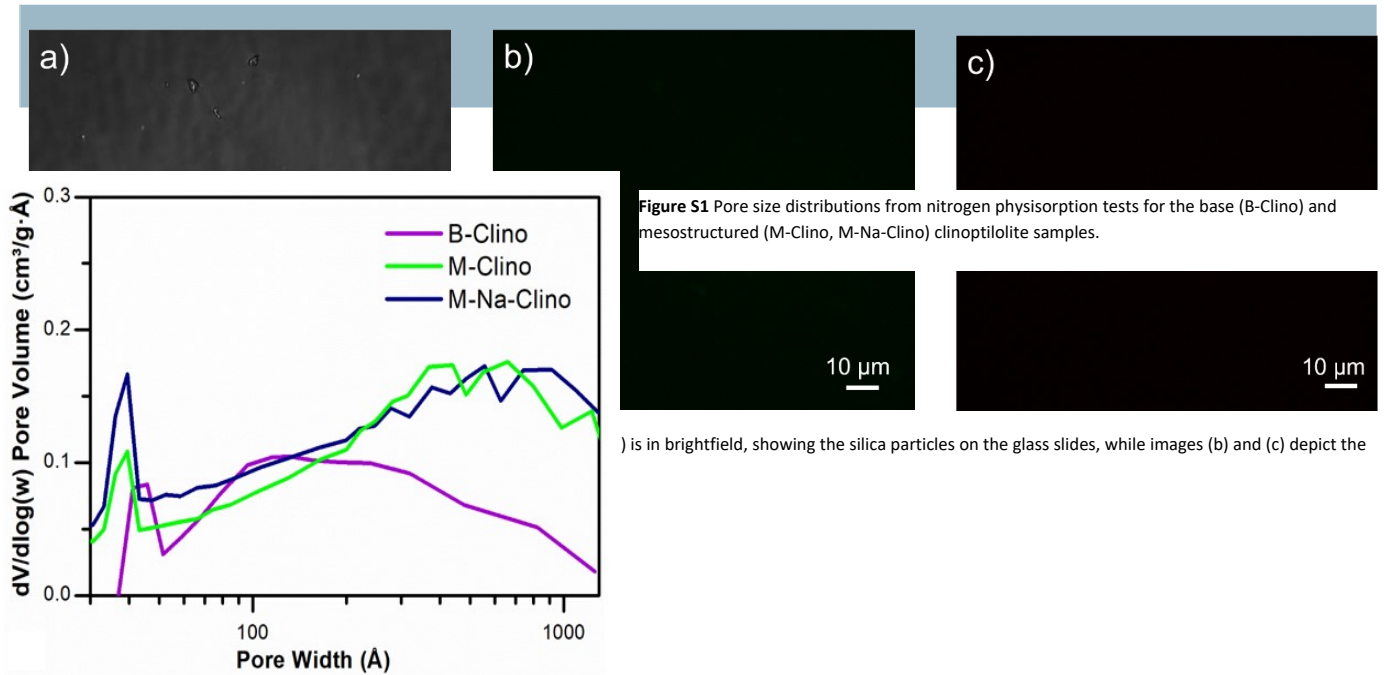
^a Department of Applied Science and Technology, Corso Duca degli Abruzzi 24, Politecnico di Torino, I-10129 Turin, Italy.

^b Escuela de Ingeniería Bioquímica, Pontificia Universidad Católica de Valparaíso, Av. Brasil 2085, Valparaíso, Chile.

^c Bioprocess Engineering and Applied Biocatalysis Group, Department of Chemical, Biological and Environmental Engineering, Universitat Autònoma de Barcelona, 08193.

*: corresponding author. Tel. +39 011 0904753; E-mail address: marco.piumetti@polito.it

†: corresponding author. Tel. +56 32 2372018; E-mail address: carminna.ottone@pucv.cl



(a) is in brightfield, showing the silica particles on the glass slides, while images (b) and (c) depict the

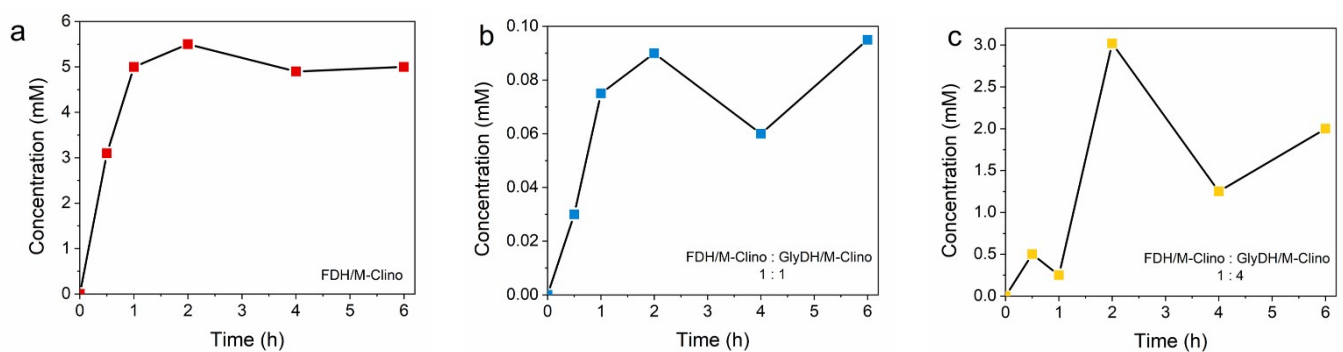
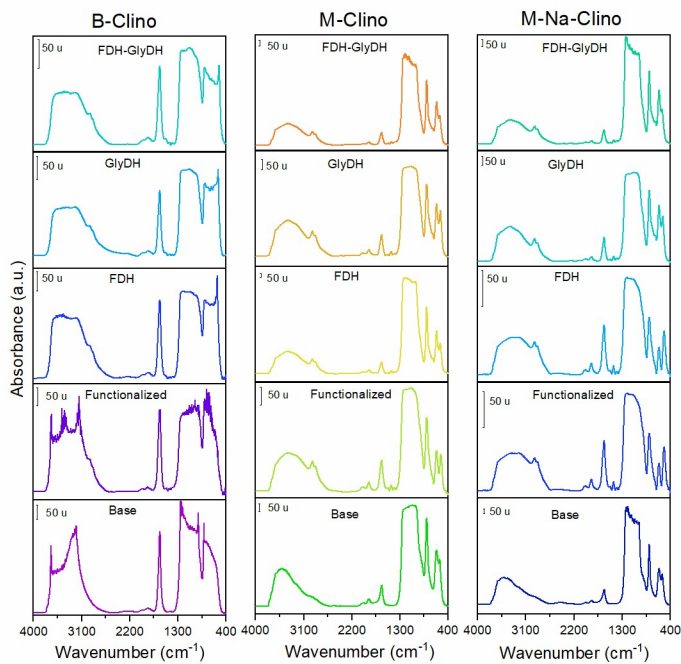


Figure S4 Variation of concentration of formic acid over time due to the reduction of CO_2 by FDH, NAD^+ 10 mM dissolved in the initial solution (a) FDH:GlyDH 1:1 ratio NAD^+ 10 mM dissolved in the initial solution (b) FDH:GlyDH 1:4 ratio NAD^+ 10 mM dissolved in the initial solution (c).