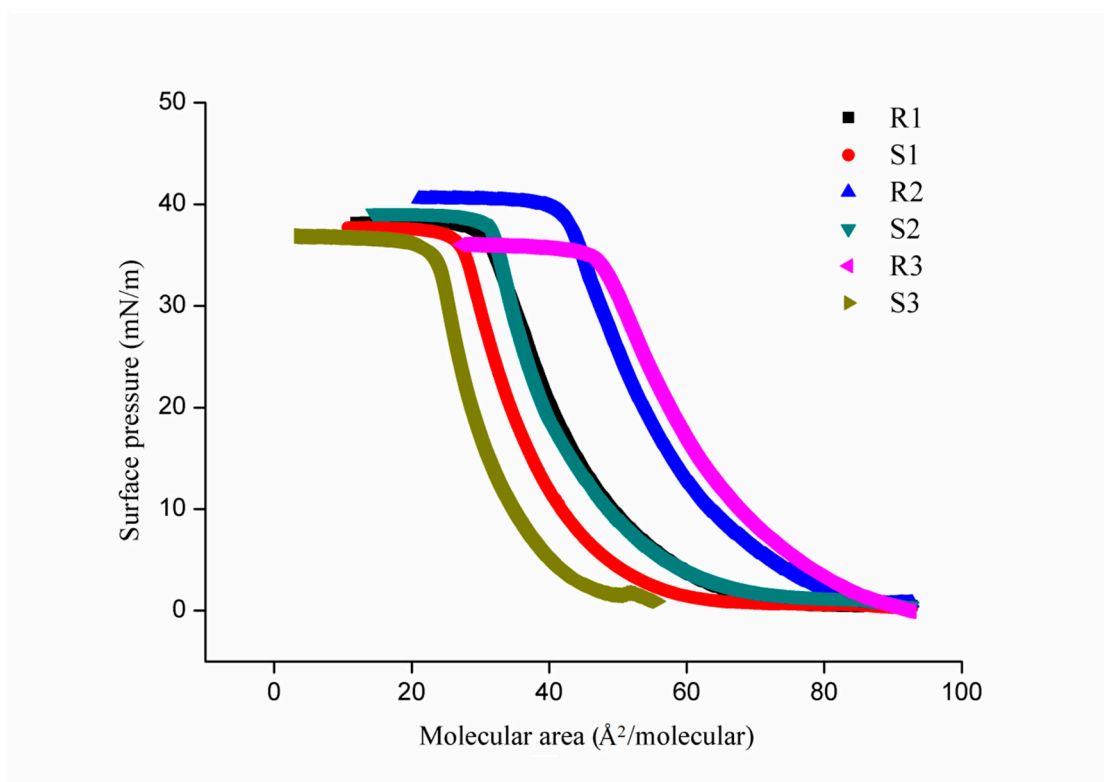
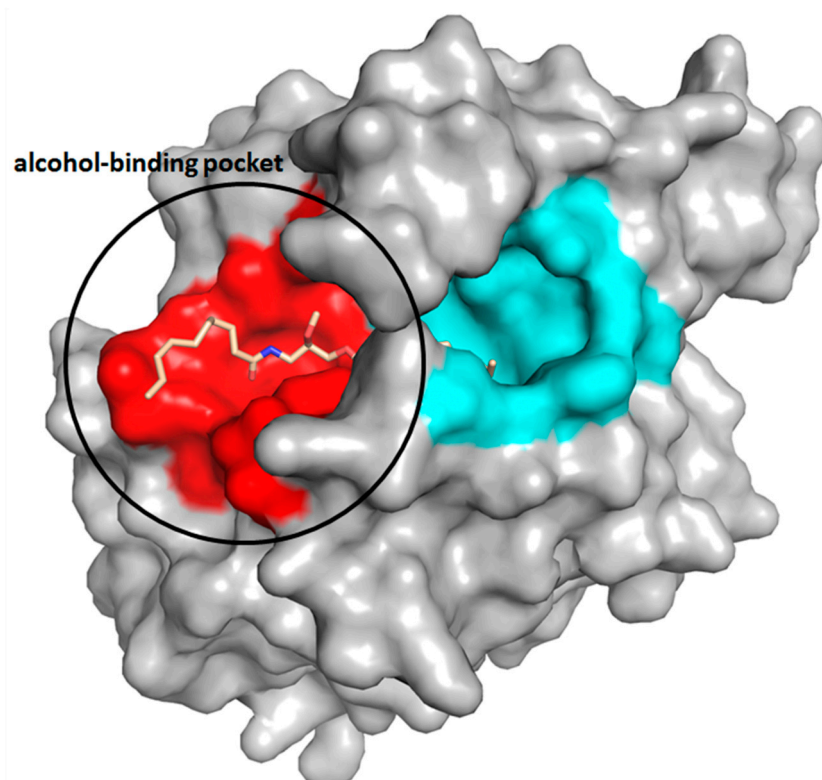


**Figure S1.** Surface pressure-area isotherms of different phospholipids and MGDG.



**Figure S2.** Surface pressure-area isotherms of different DDGs.



**Figure S3.** The catalytic pocket of GZEL. It can be subdivided into two parts, an acyl-binding pocket (hydrophobic pocket that shown in blue) and an alcohol-binding pocket (polar pocket that shown in red).