

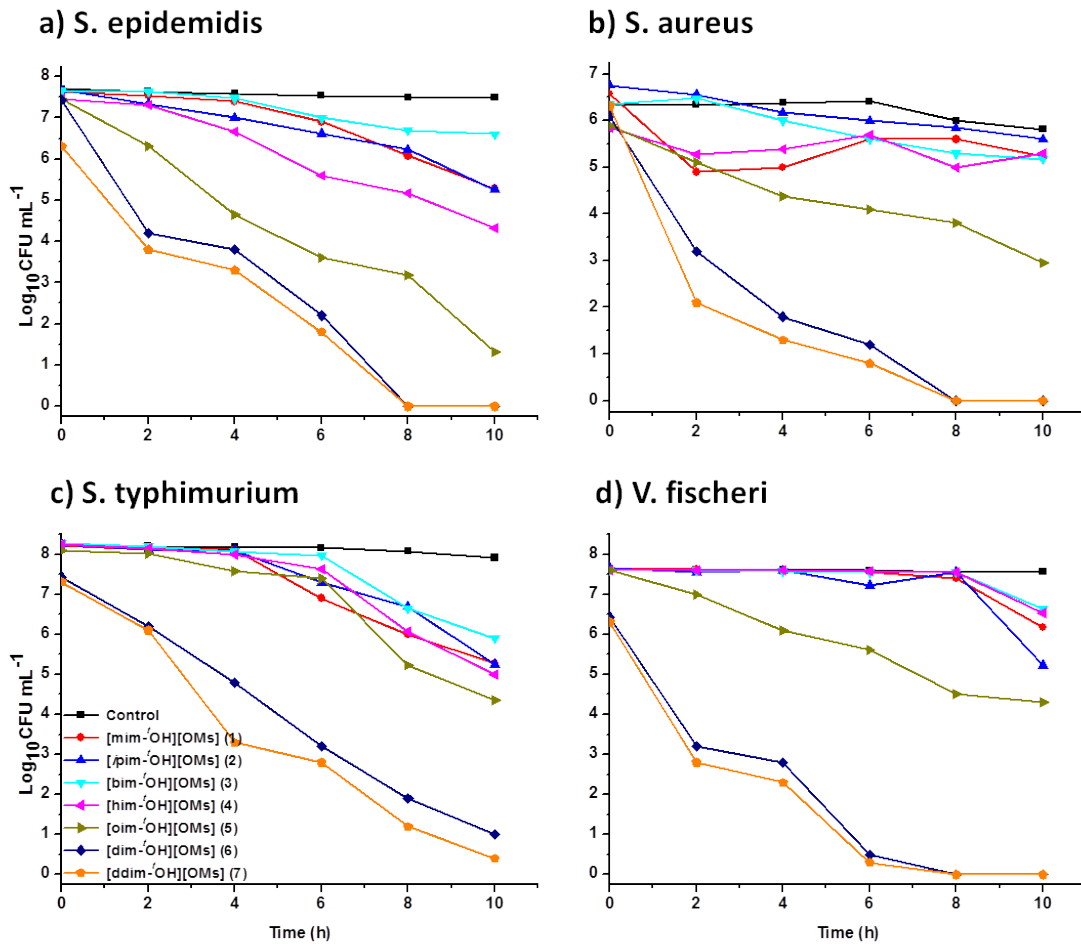
## Supporting Information

# **Antibiofilm Activity of *tert*-BuOH Functionalized Ionic Liquids with Methylsulfonate counteranion**

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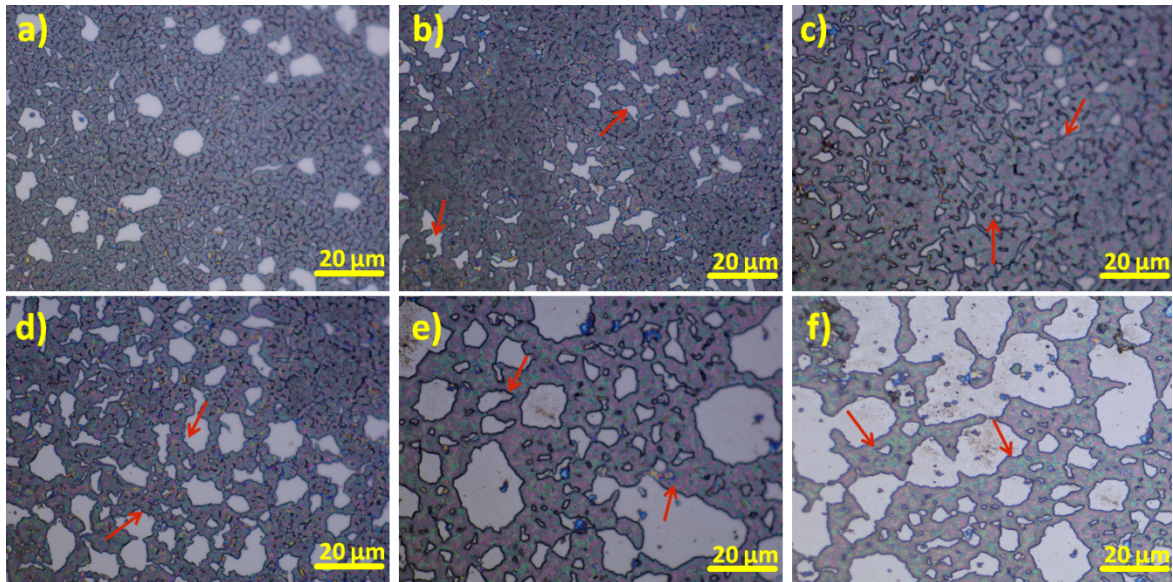
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**Figure 1**



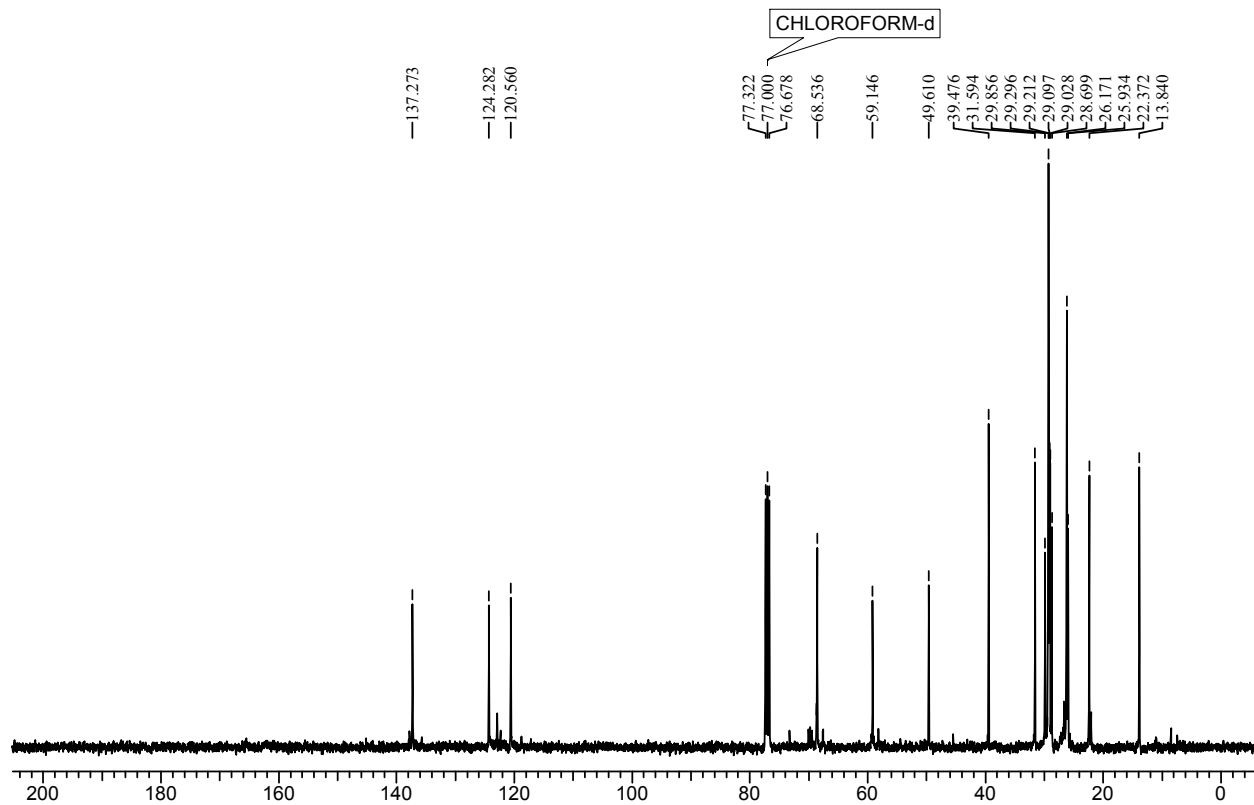
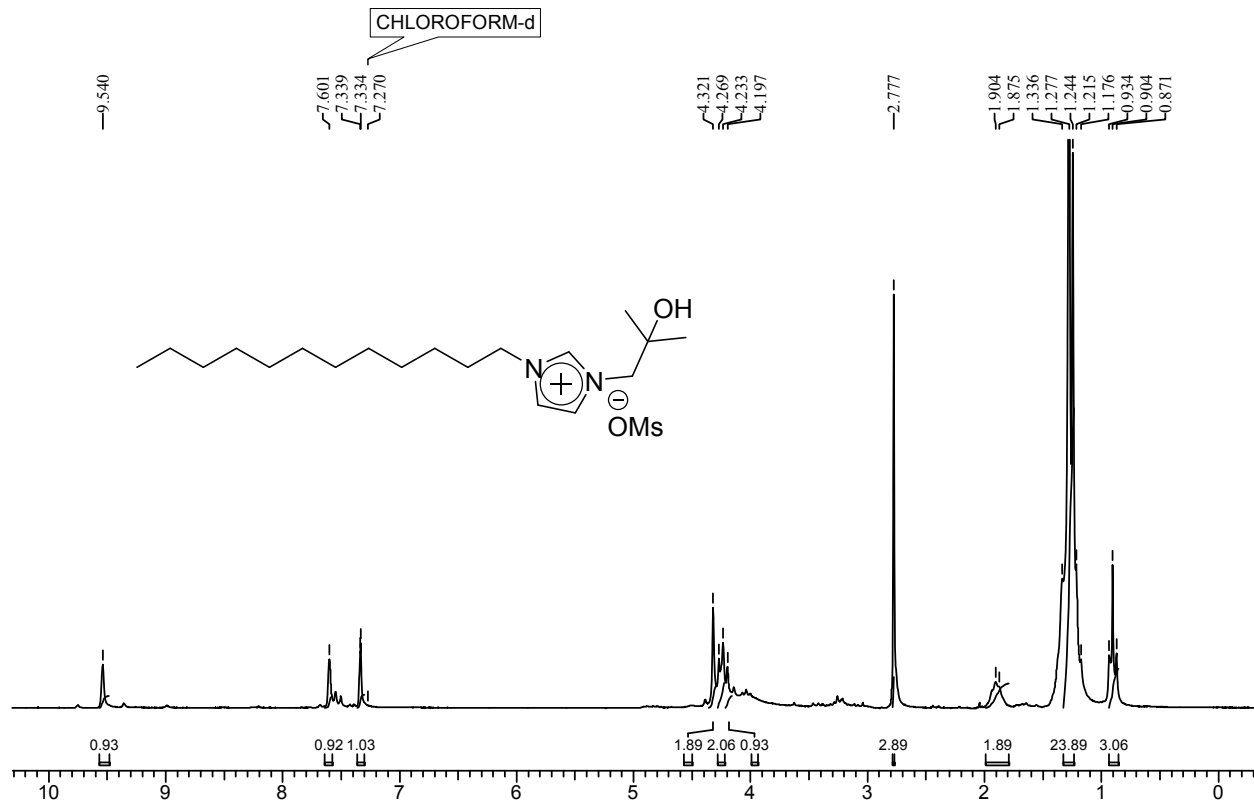
**Fig. 1** Inhibitory effect [alkyl-im-'OH][OMs] ILs against four bacteria over 10 h of exposure time. Each data point represents a log of an average of colony forming units (CFU per mL).

**Figure 2**

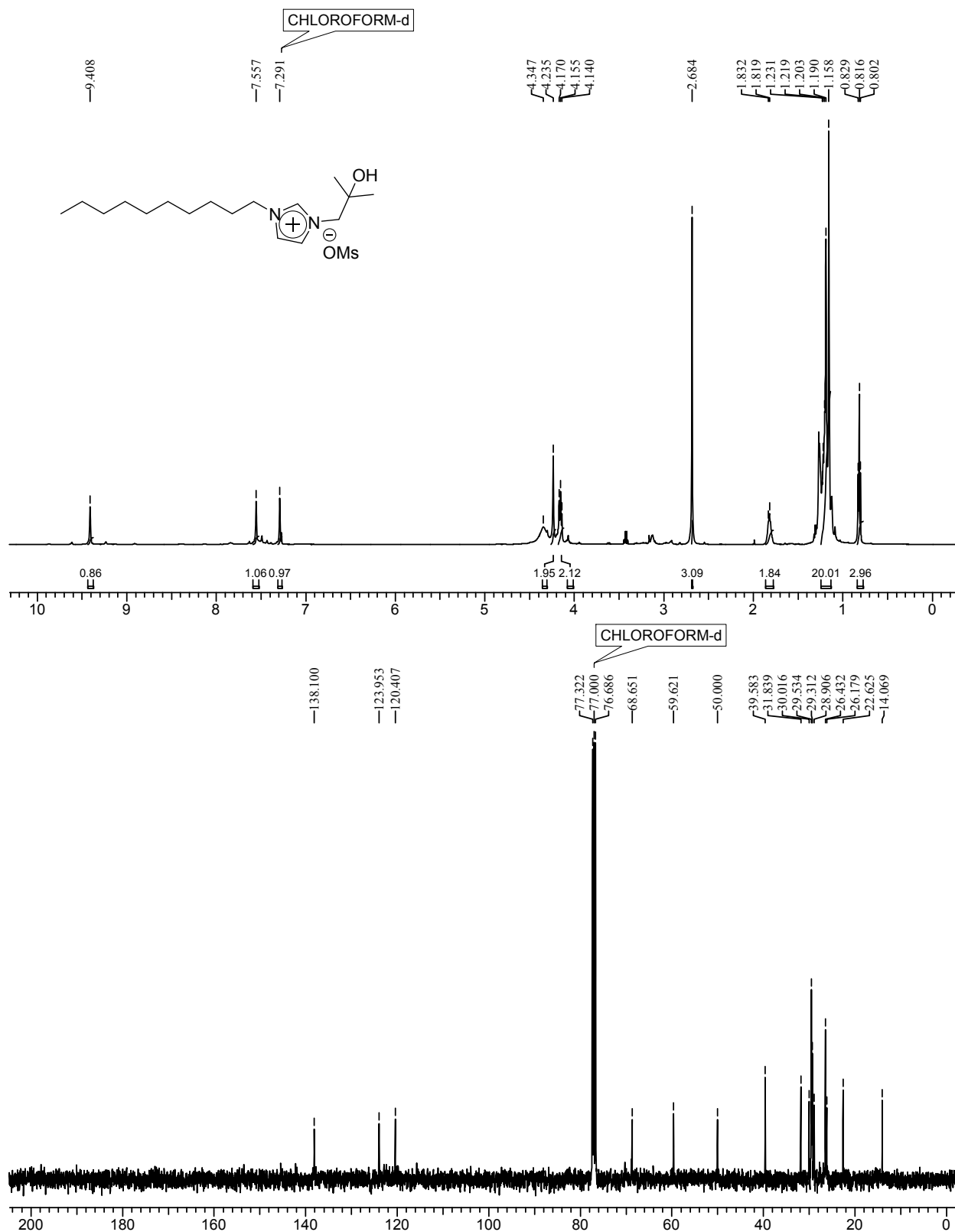


**Fig.2.** Optical microscopic images distorted morphology (indicated by red arrows) of *S. epidermidis* biofilm after exposure of 100 μM concentration IL's for 4 h where, a) Control (without ionic liquids), b) mim-'OH (C<sub>1</sub>), c) ipim-'OH C<sub>3</sub>), d) bim-'OH (C<sub>4</sub>), e) him-'OH (C<sub>6</sub>), f) Oim-'OH (C<sub>8</sub>).

1-(2-hydroxy-2-methyl-*n*-propyl)-3-*n*-dodecylimadazolium mesylate, [C<sub>12</sub>-<sup>t</sup>OHim][OMs].



# 1-(2-hydroxy-2-methyl-*n*-propyl)-3-*n*-decylimadazolium mesylate [C<sub>10</sub>-<sup>t</sup>OHim][OMs].



1-(2-hydroxy-2-methyl-*n*-propyl)-3-*n*-octylimadazolium mesylate [C<sub>8</sub>-<sup>t</sup>OHim][OMs].

