

Electronic Supplementary Information

## Injectable PEDOT:PSS/cholinium ionic liquid mixed conducting materials for electrocardiogram recordings

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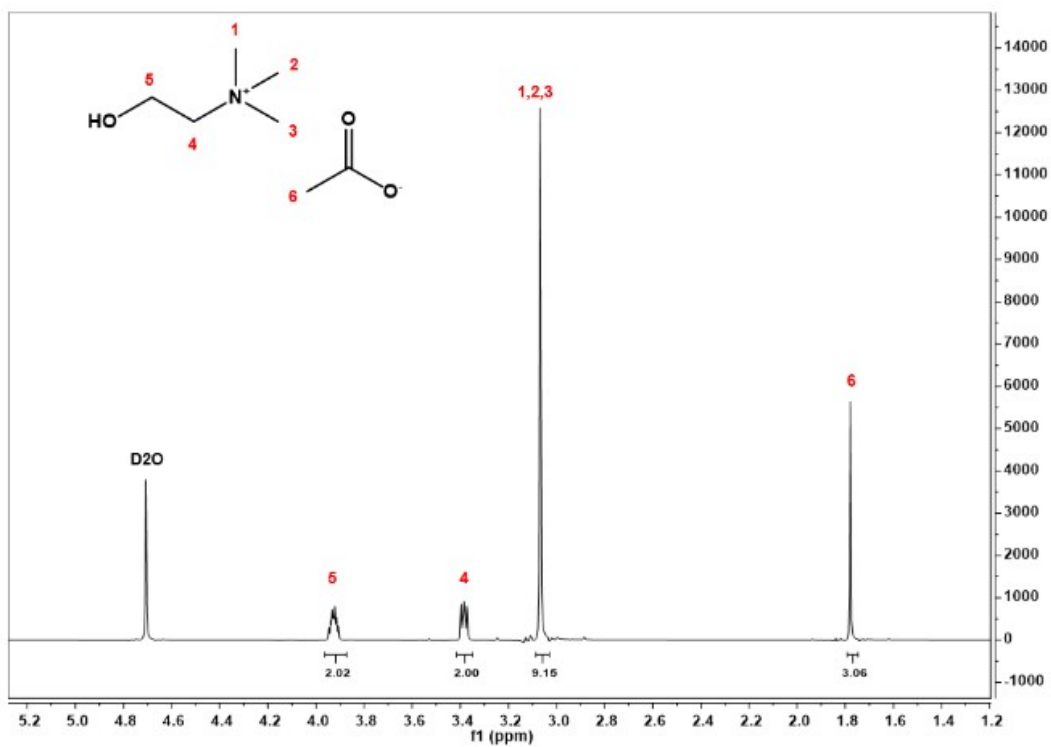


Figure S1  $^1\text{H}$  NMR spectra of [Ch][Ac] ionic liquid.

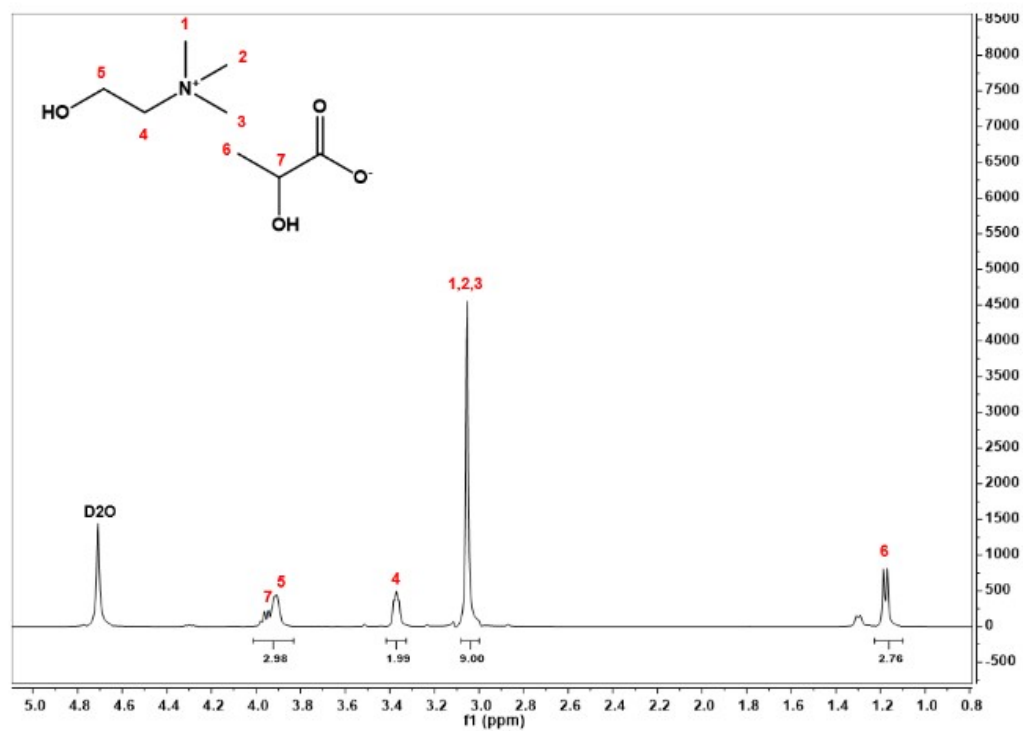


Figure S2  $^1\text{H}$  NMR spectra of [Ch][Lac] ionic liquid.

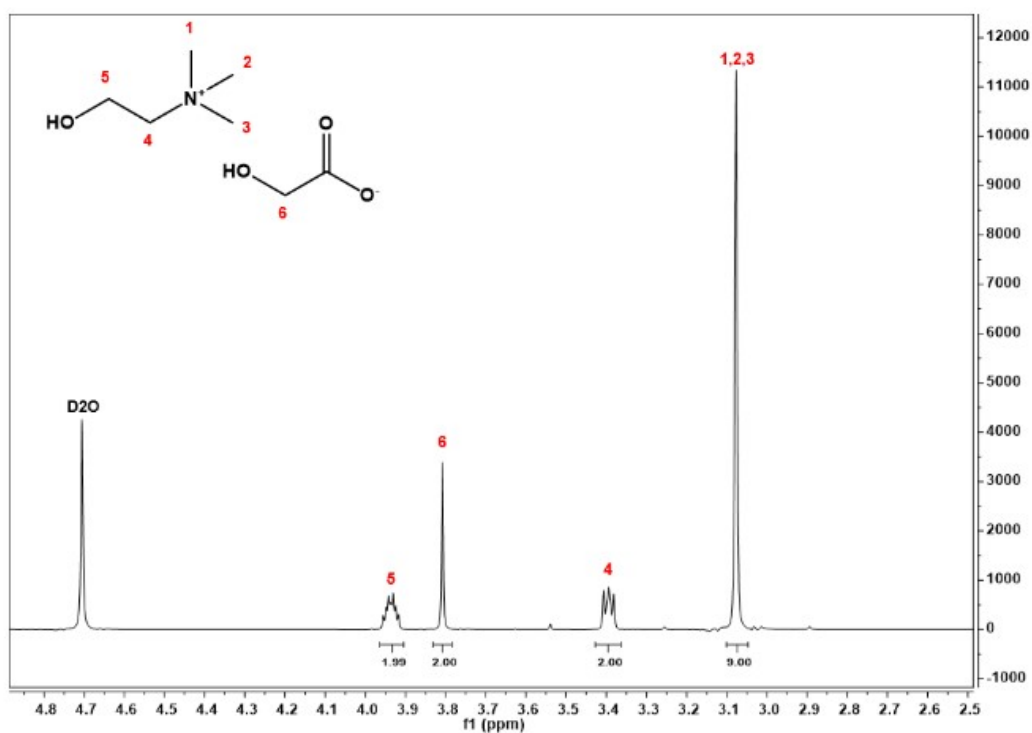


Figure S3  $^1\text{H}$  NMR spectra of [Ch][Glyco]

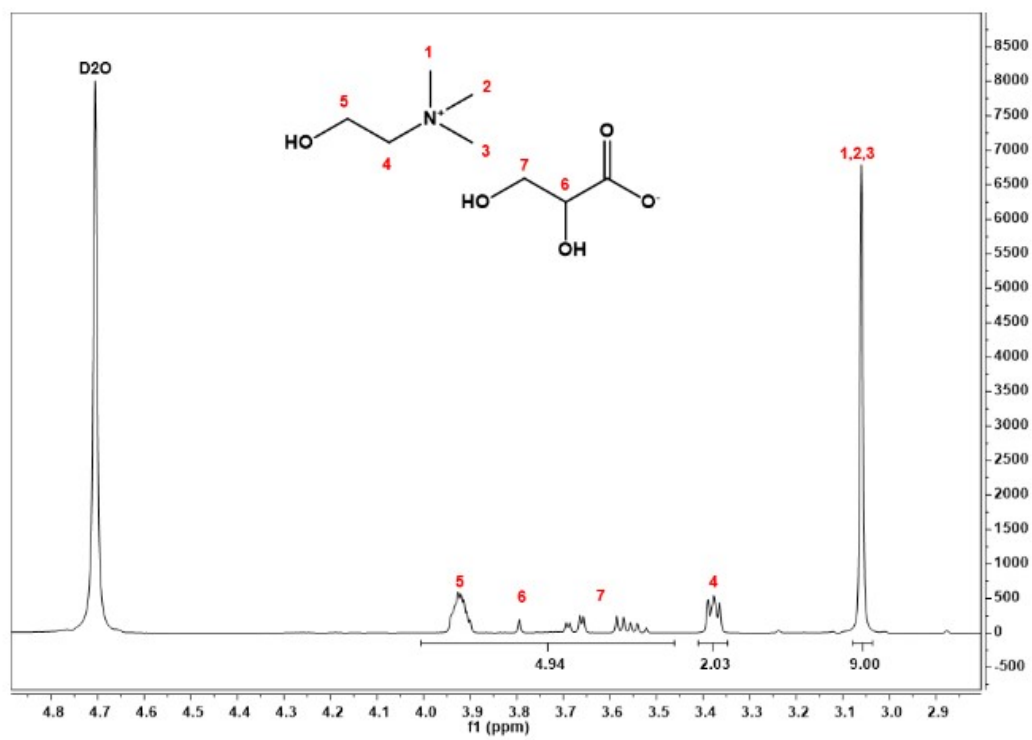


Figure S4  $^1\text{H}$  NMR spectra of [Ch][Glyce]

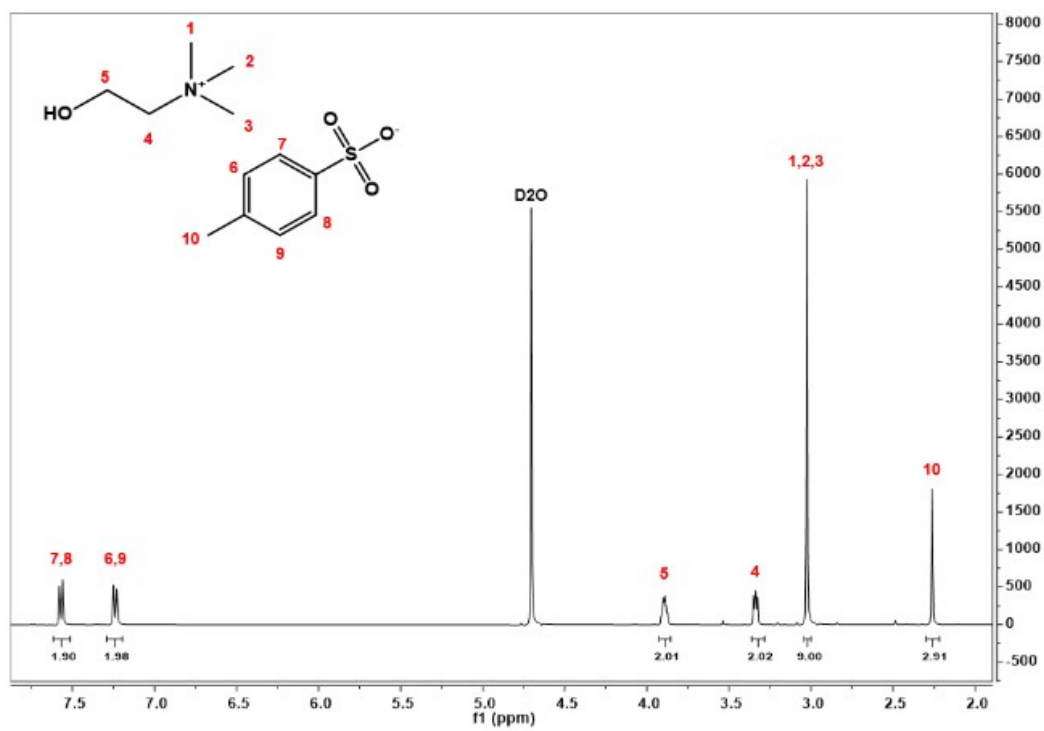


Figure S5 <sup>1</sup>H NMR spectra of [Ch][Tos]

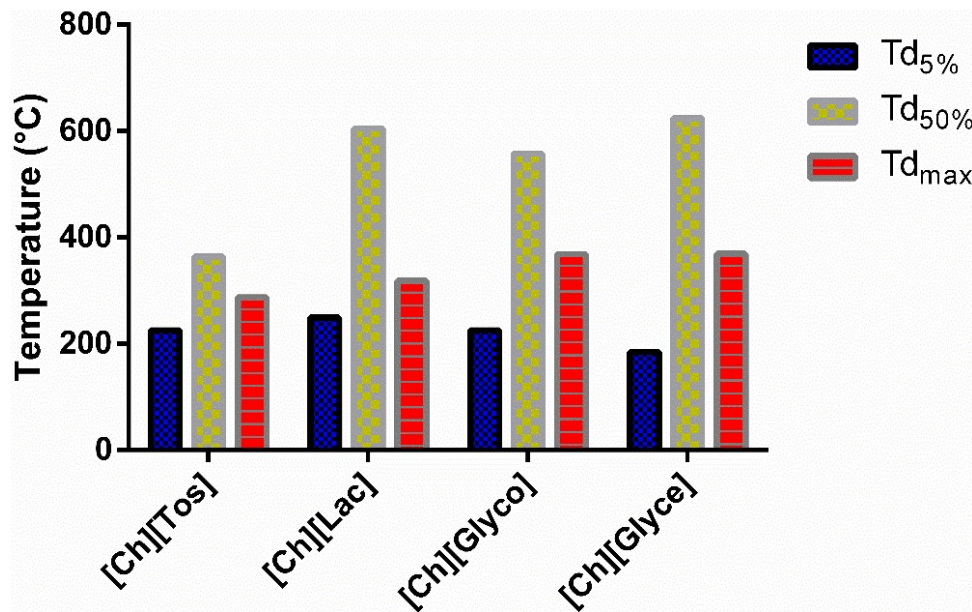


Figure S6 Decomposition temperatures at 5% (Td<sub>5%</sub>) and (Td<sub>50%</sub>) of weight loss; and maximum decomposition temperature (Td<sub>max</sub>) for the as-prepared composite films.

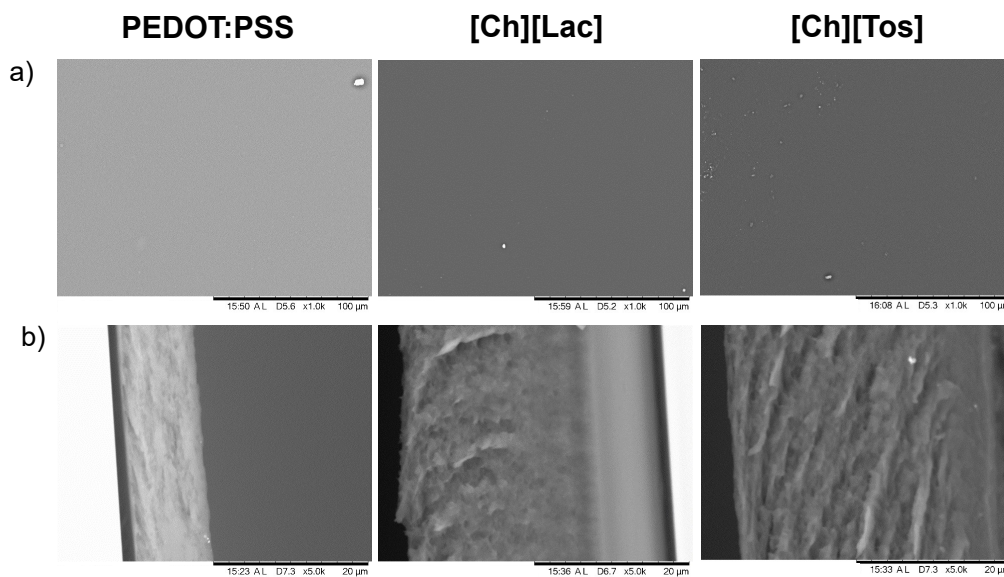


Figure S7 SEM images of pure PEDOT:PSS, PEDOT:PSS/[Ch][Lac] 60/40 and PEDOT:PSS/[Ch][Tos] 60/40 composite films of a) surfaces and b) cross-sections.

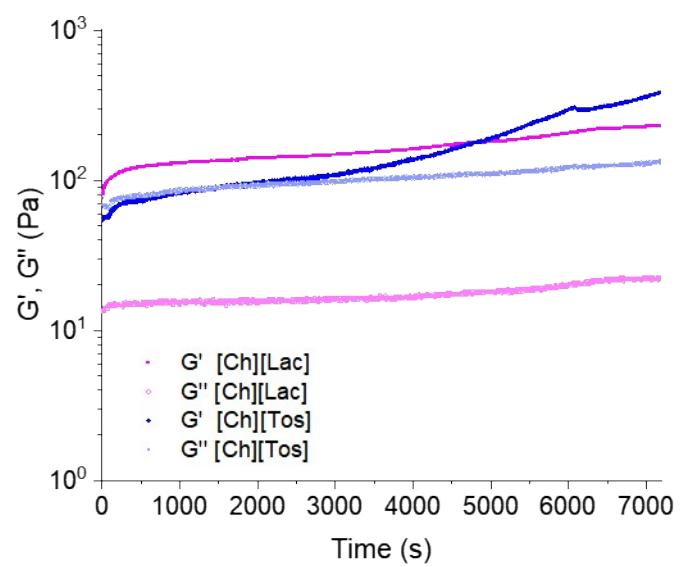


Figure S8 Storage modulus ( $G'$ ) and loss modulus ( $G''$ ) of PEDOT:PSS with 40 wt% of [Ch][Lac] or [Ch][Tos] ILs as a function of time.