

Supporting Information

The synthesis of poly(vinyl alcohol) grafted with fluorinated protic ionic liquids containing sulfo functional groups

Patrycja Glińska ¹, Andrzej Wolan ^{1,2}, Wojciech Kujawski ^{1,*}, Edyta Rynkowska ¹, and Joanna Kujawa ¹

¹ Nicolaus Copernicus University in Toruń, Faculty of Chemistry, 7 Gagarina Street, 87-100 Toruń, Poland

² Synthex Technologies Sp. z o.o., 7 Gagarina Street, 87-100 Toruń, Poland

* Correspondence: kujawski@chem.umk.pl

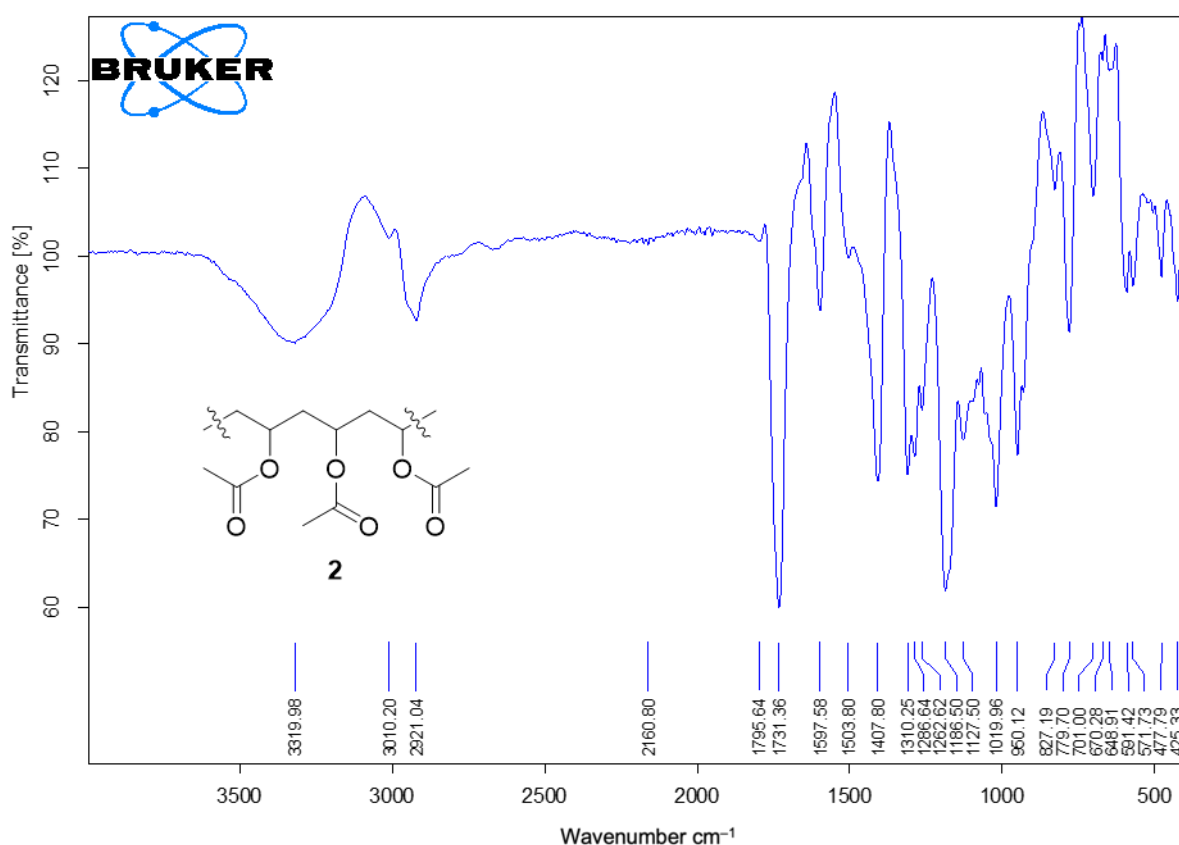


Figure S1. IR spectrum of polymer I (PVA-Ac) (2)

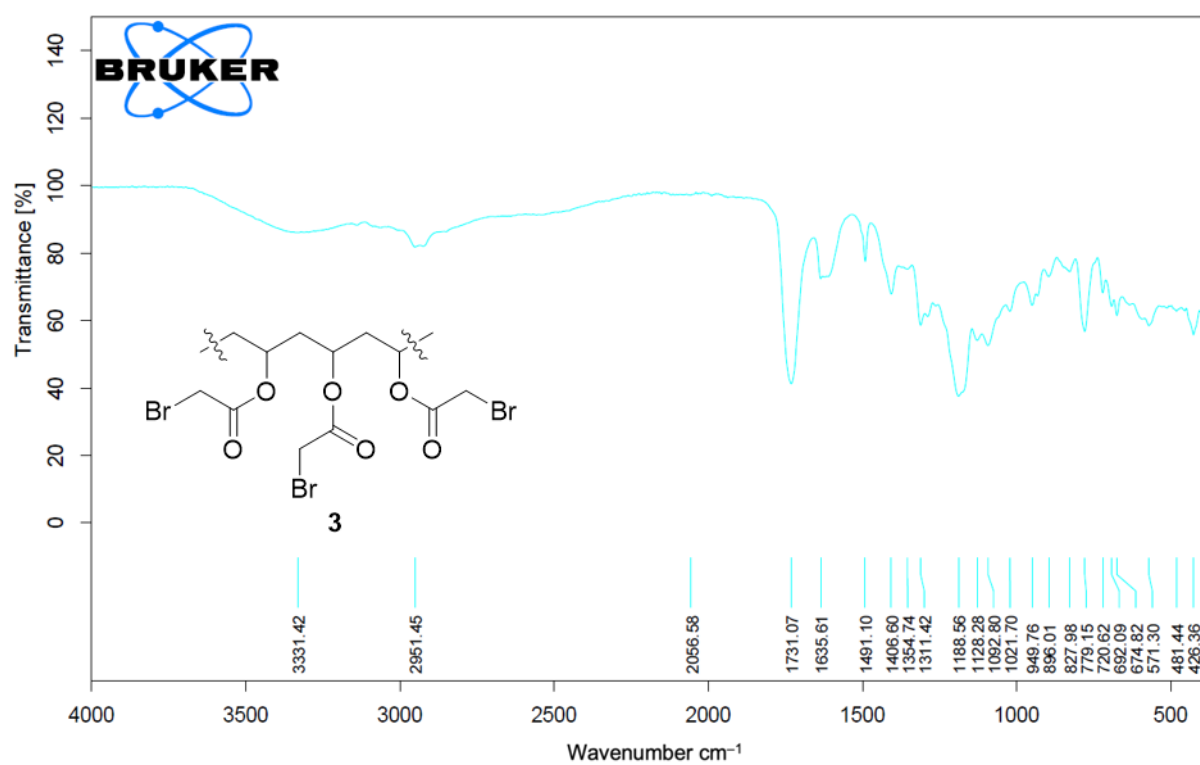


Figure S2. IR spectrum of polymer II (PVA-AcBr) (3)

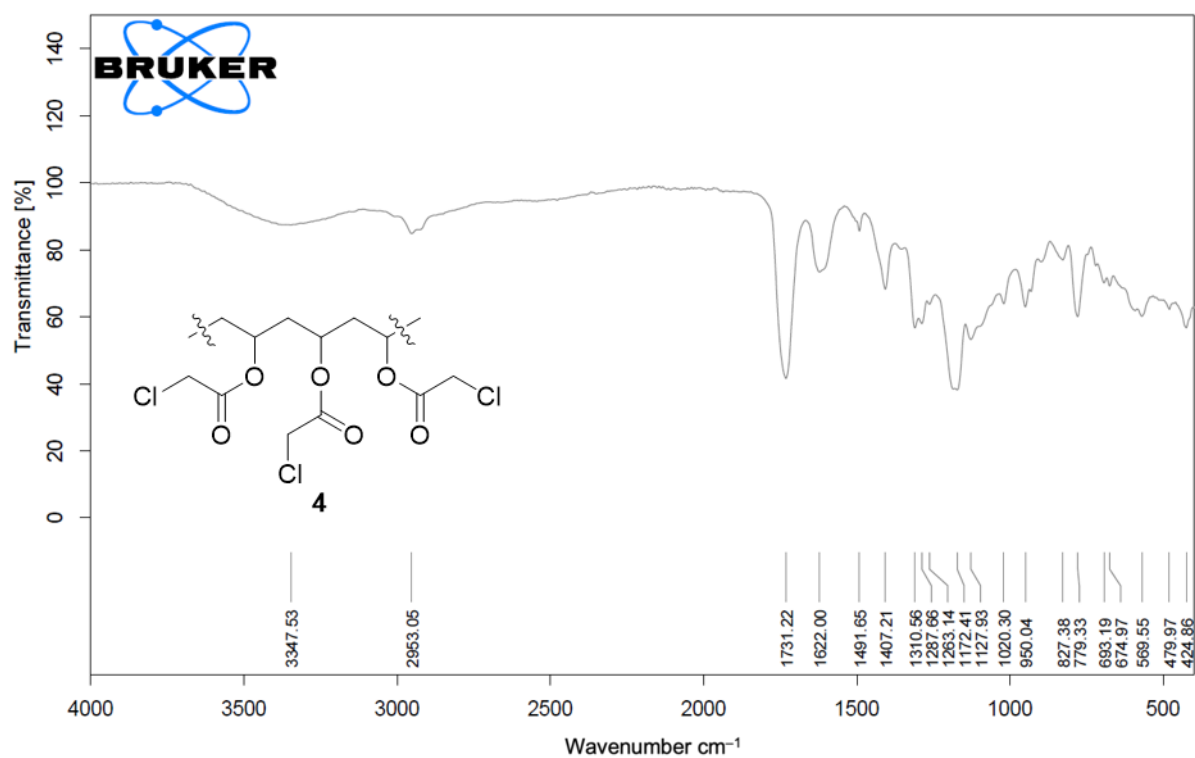


Figure S3. IR spectrum of polymer III (PVA-AcCl) (4)

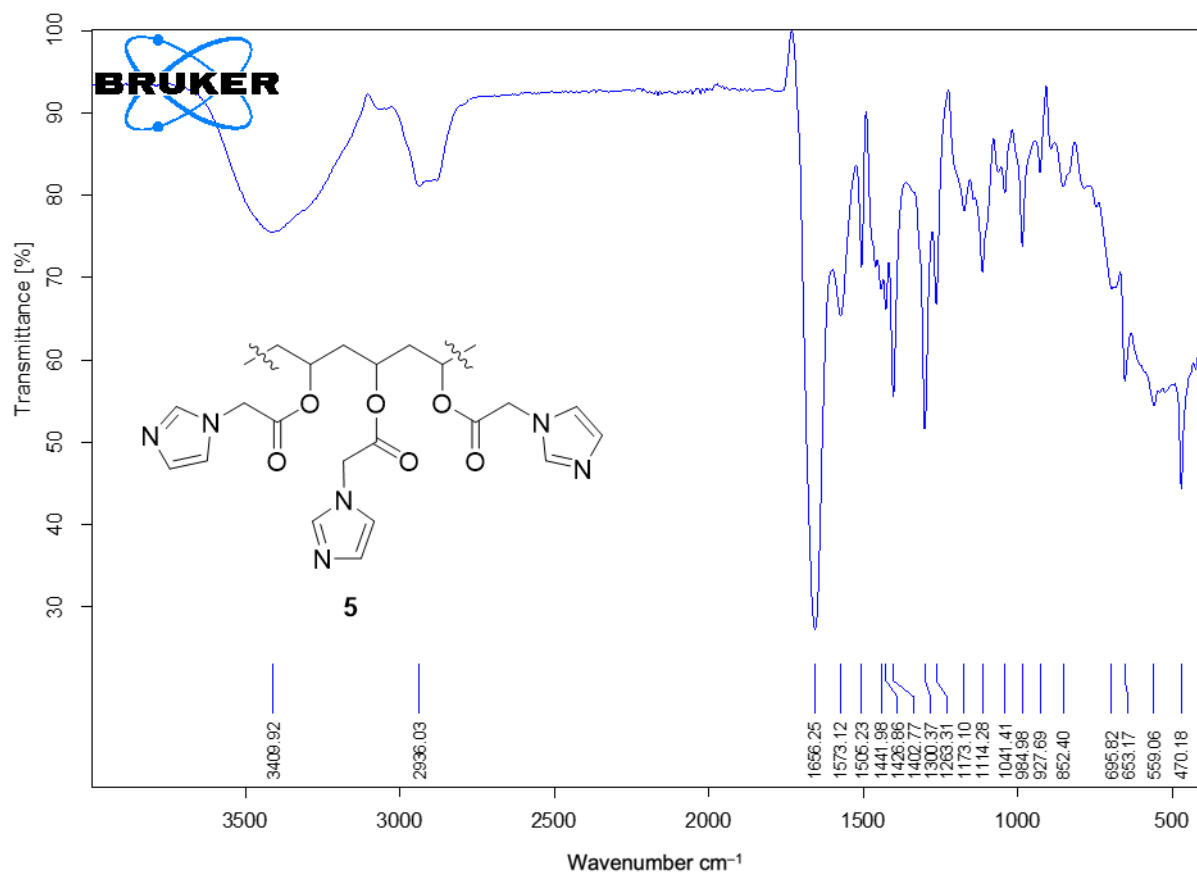


Figure S4. IR spectrum of polymer IV (PVA-AcIm) (5)

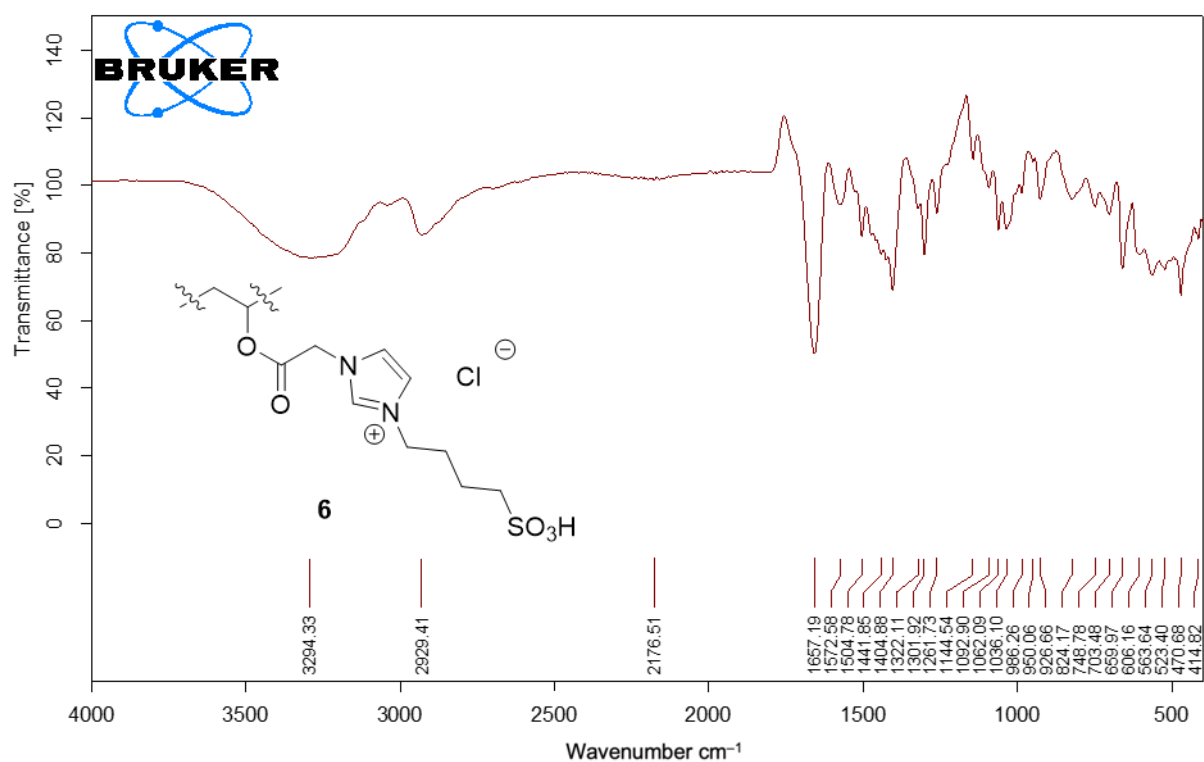


Figure S5. IR spectrum of polymer V (PVA-AcIm-1,4) (6)

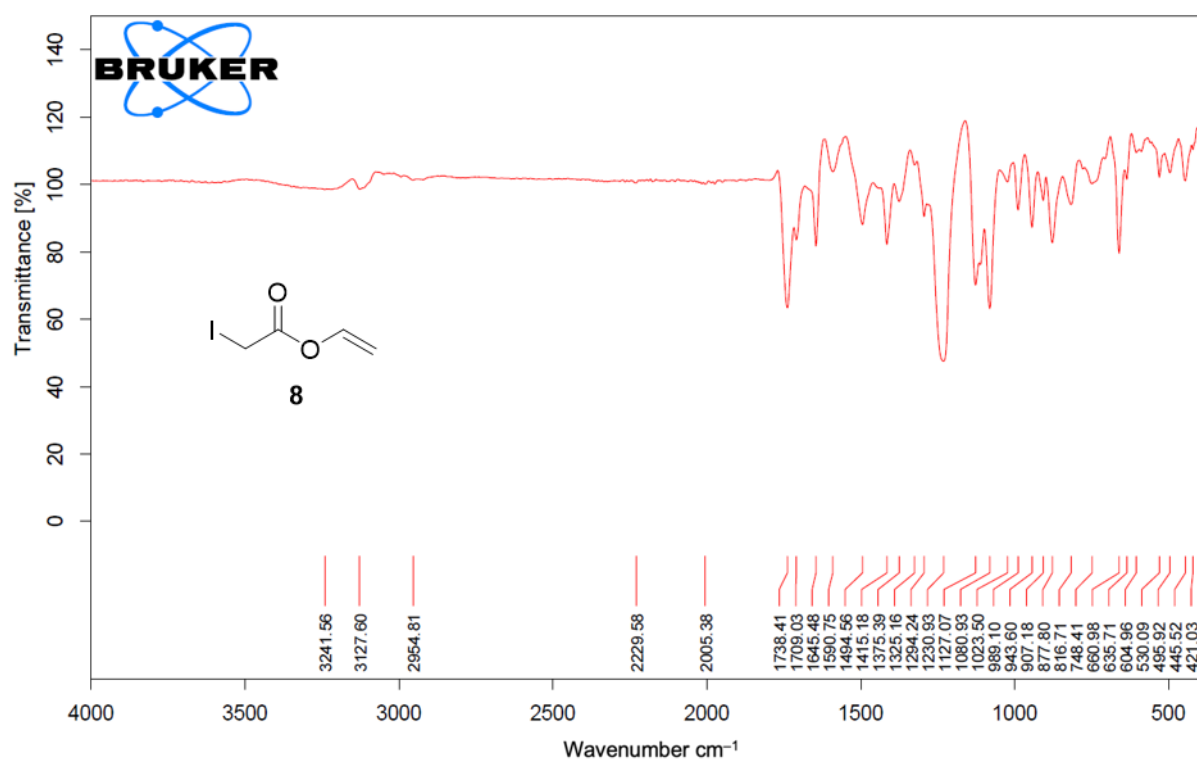


Figure S6. IR spectrum of vinyl 2-iodoacetate (8)

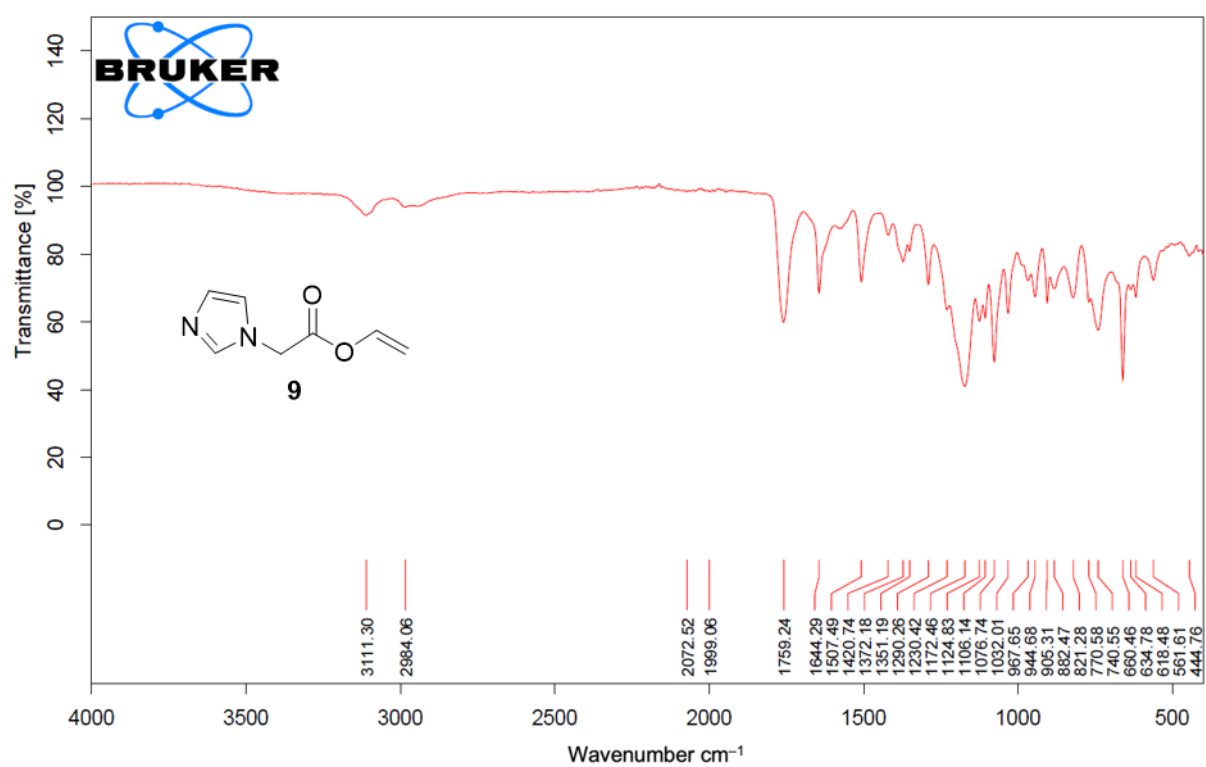


Figure S7. IR spectrum of vinyl 2-(1H-imidazol-1-yl)acetate (9)

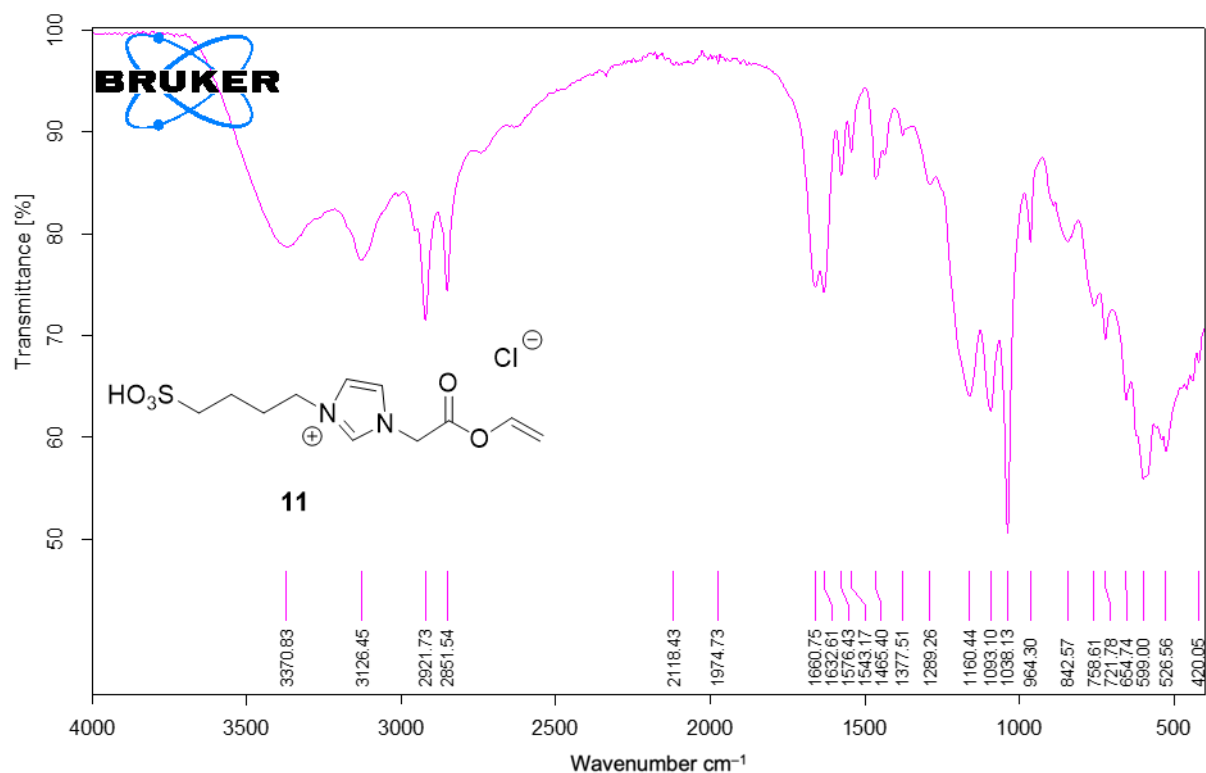


Figure S8. IR spectrum of 1-(2-Oxo-2-(vinylloxy)ethyl)-3-(4-sulfobutyl)-1H-imidazol-3-ium chloride (**11**)

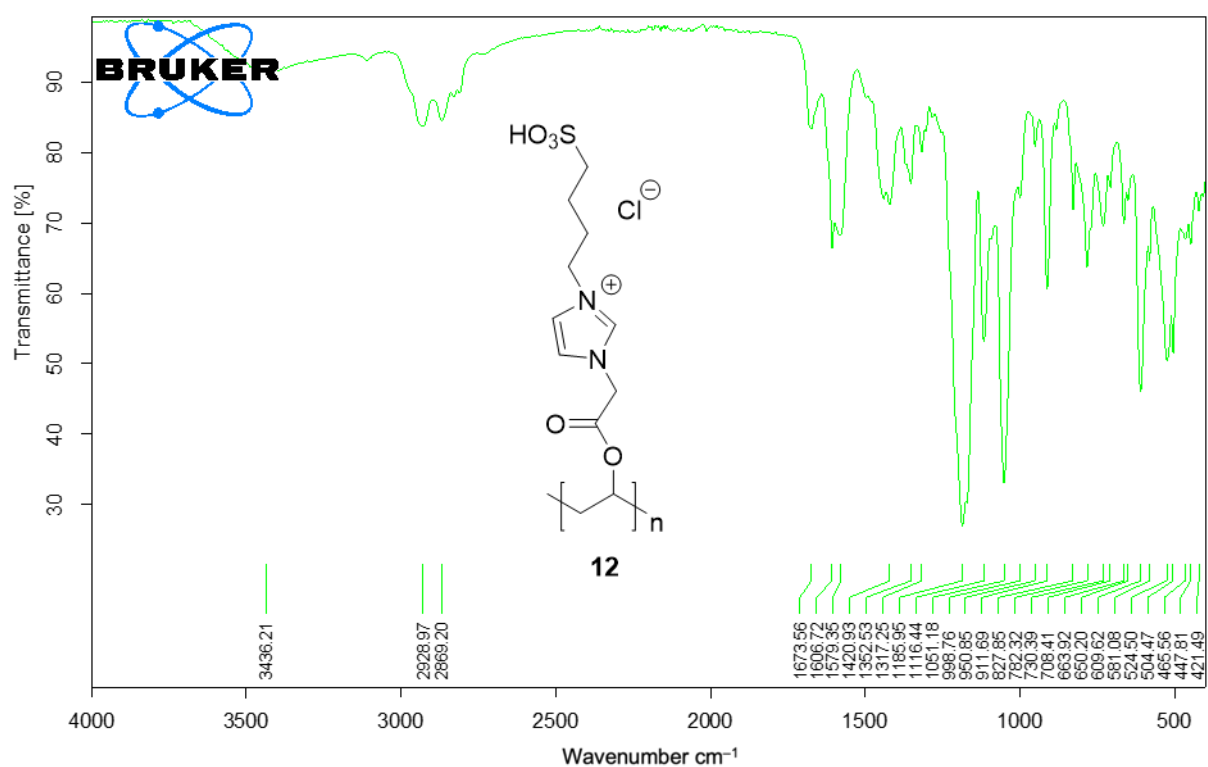


Figure S9. IR spectrum of polymer VI (PVA-ImSO₃H) (12)

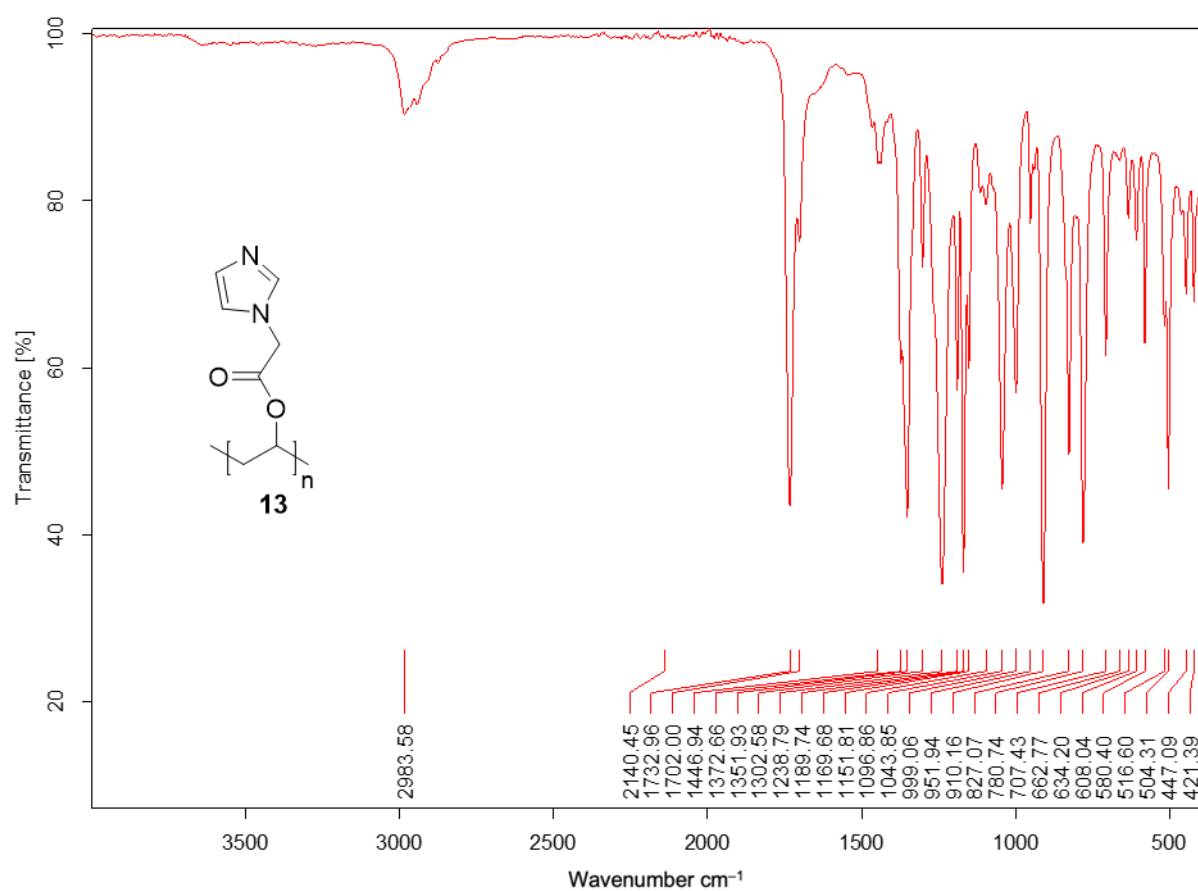


Figure S10. IR spectrum of Polymer VII (PVA-Im) (**13**)

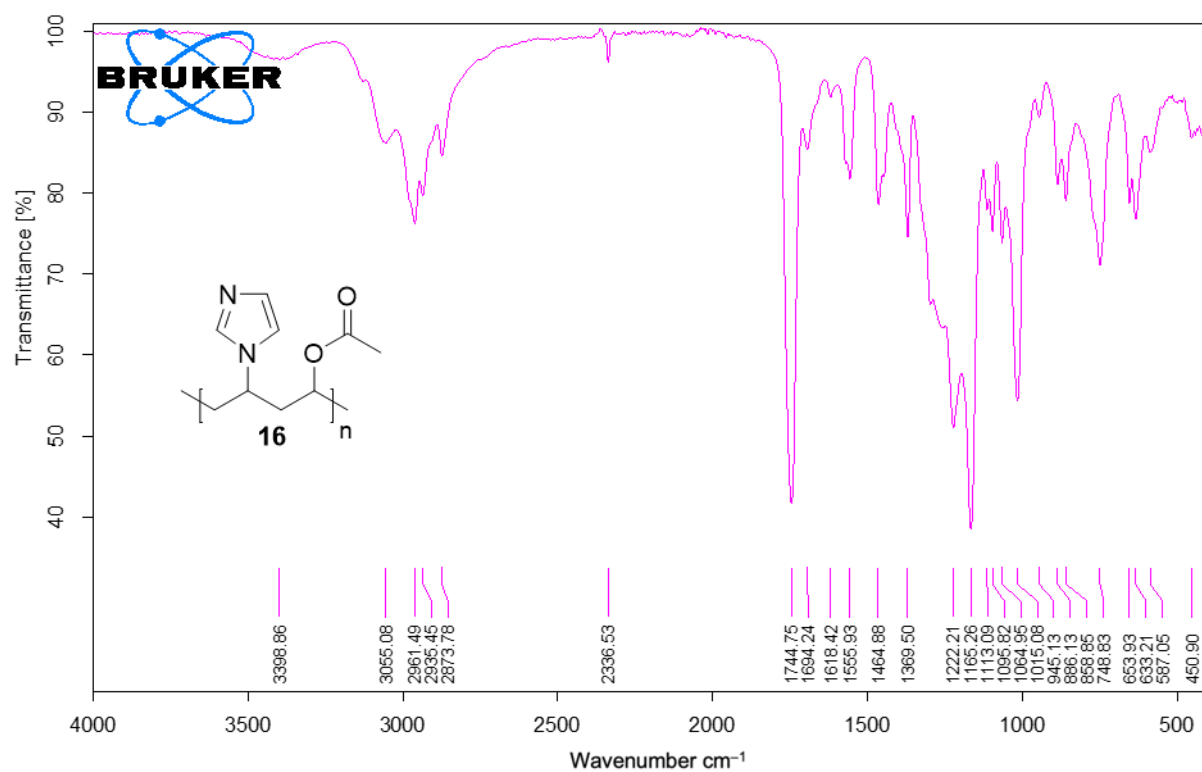


Figure S11. IR spectrum of copolymer I (Co-NVIm-VAc) (**16**)

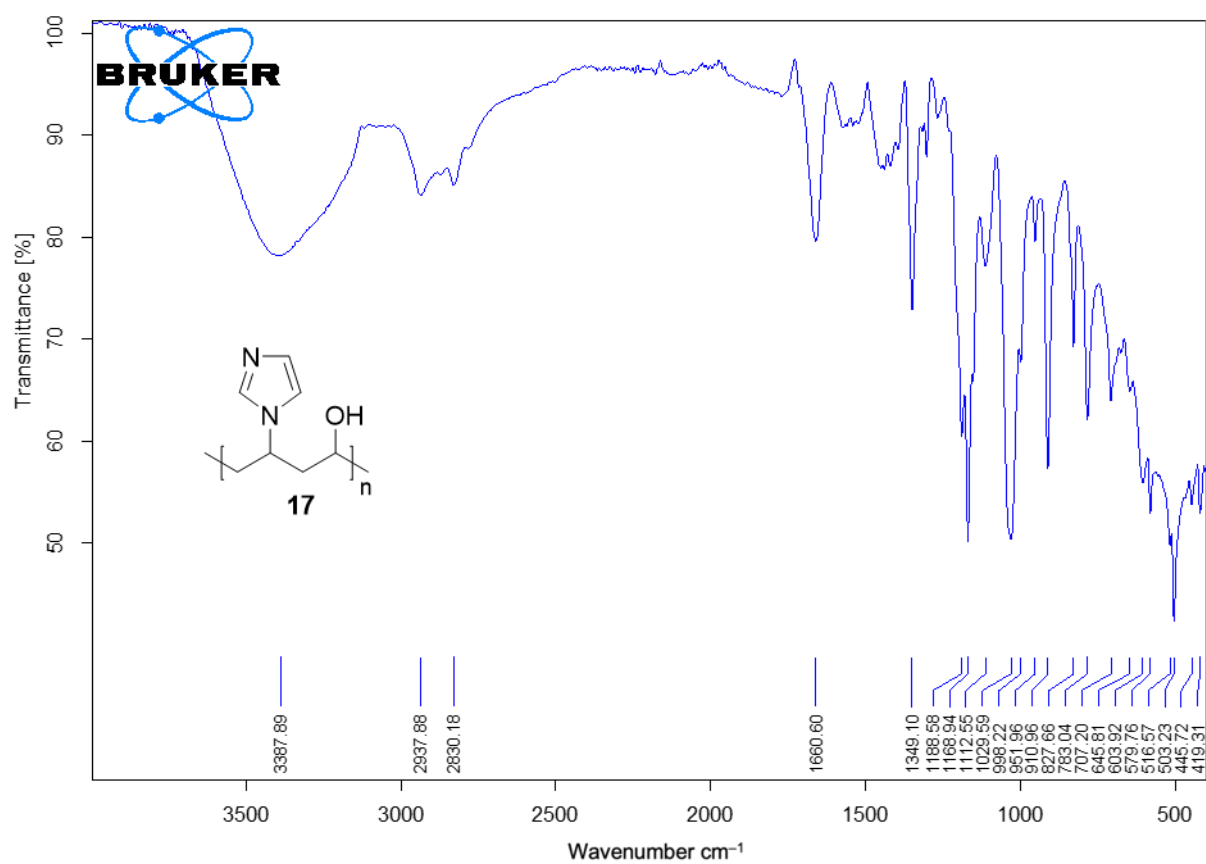


Figure S12. IR spectrum of copolymer II (Co-NVIm-PVA) (17)

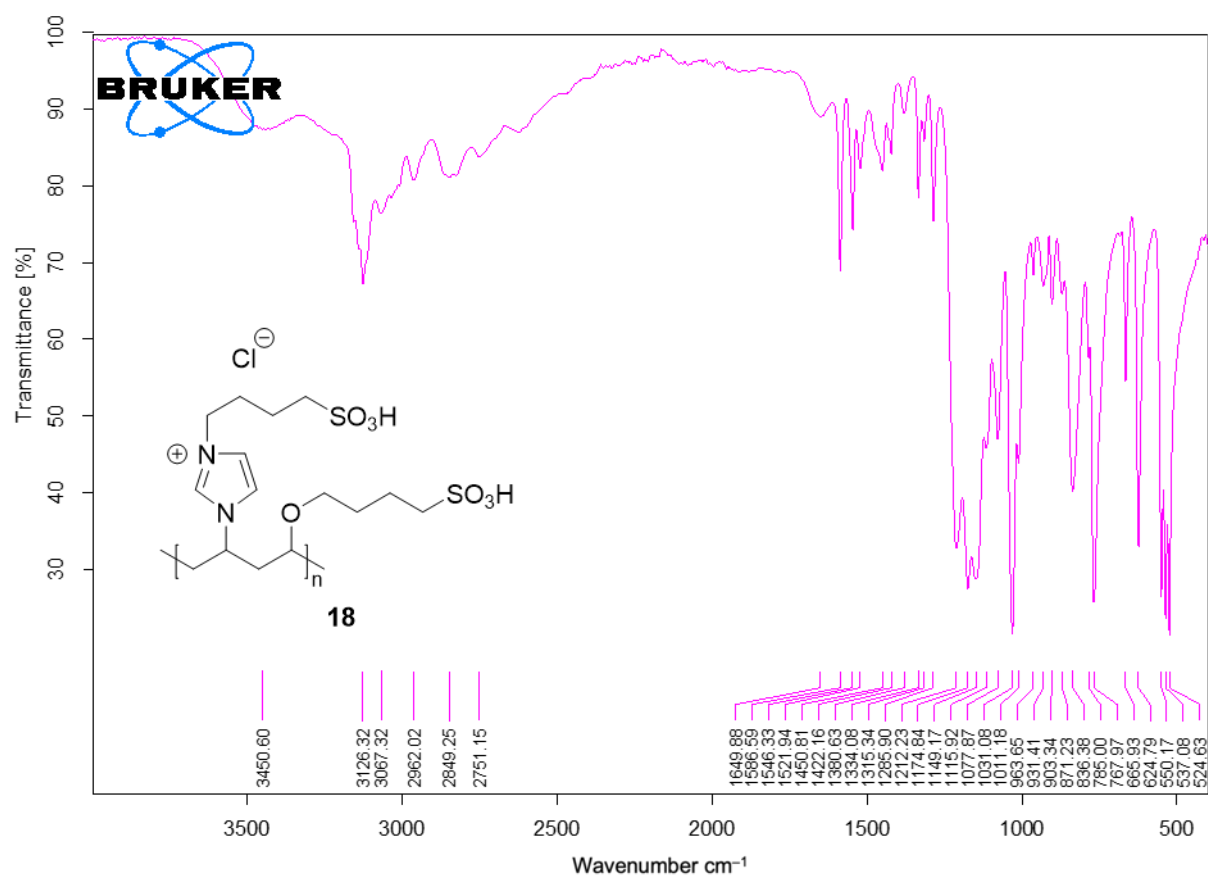


Figure S13. IR spectrum of copolymer III (Co-NVIm-PVA-1,4) (**18**)

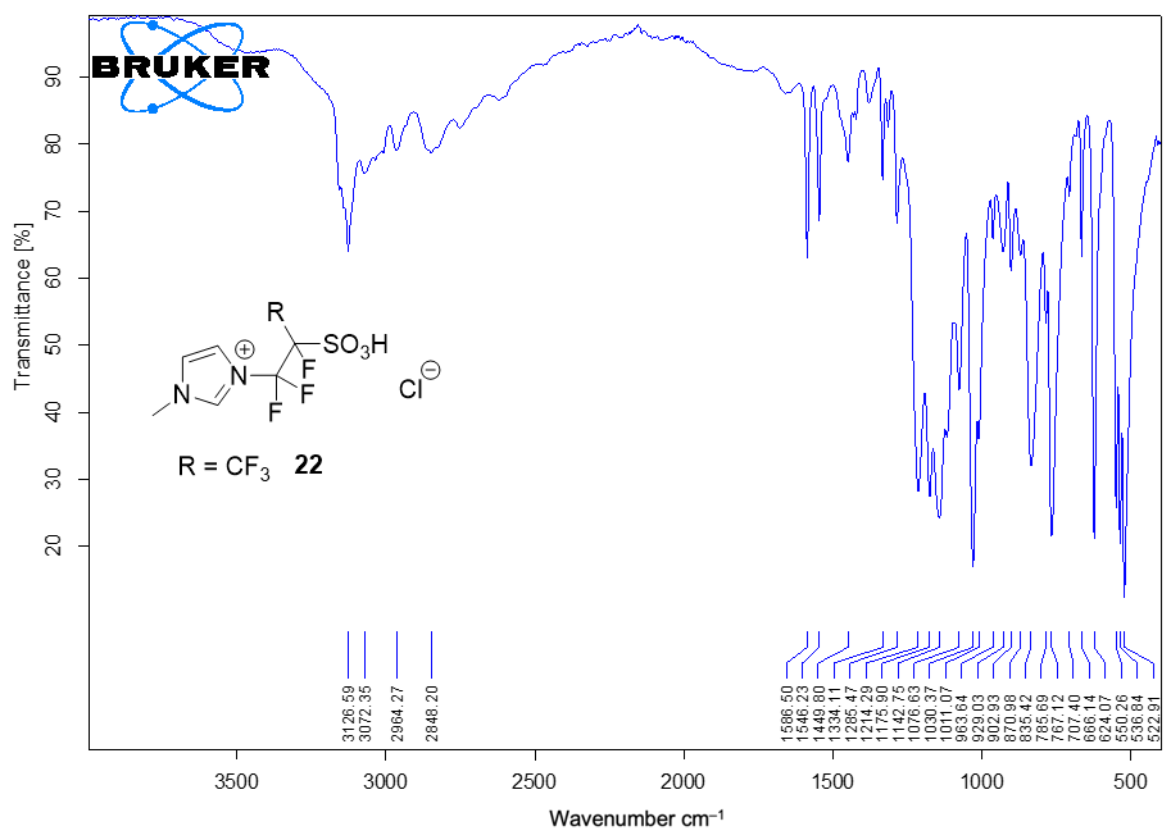


Figure S14. IR spectrum of IL I (**22**)

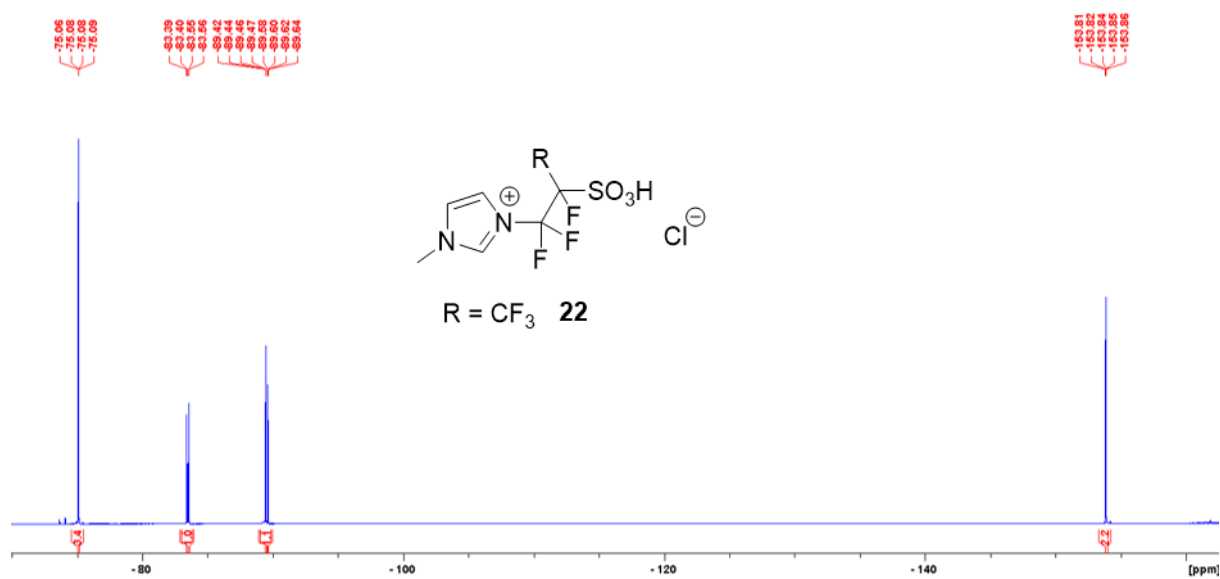


Figure S15. ^{19}F NMR spectrum of IL I (22)

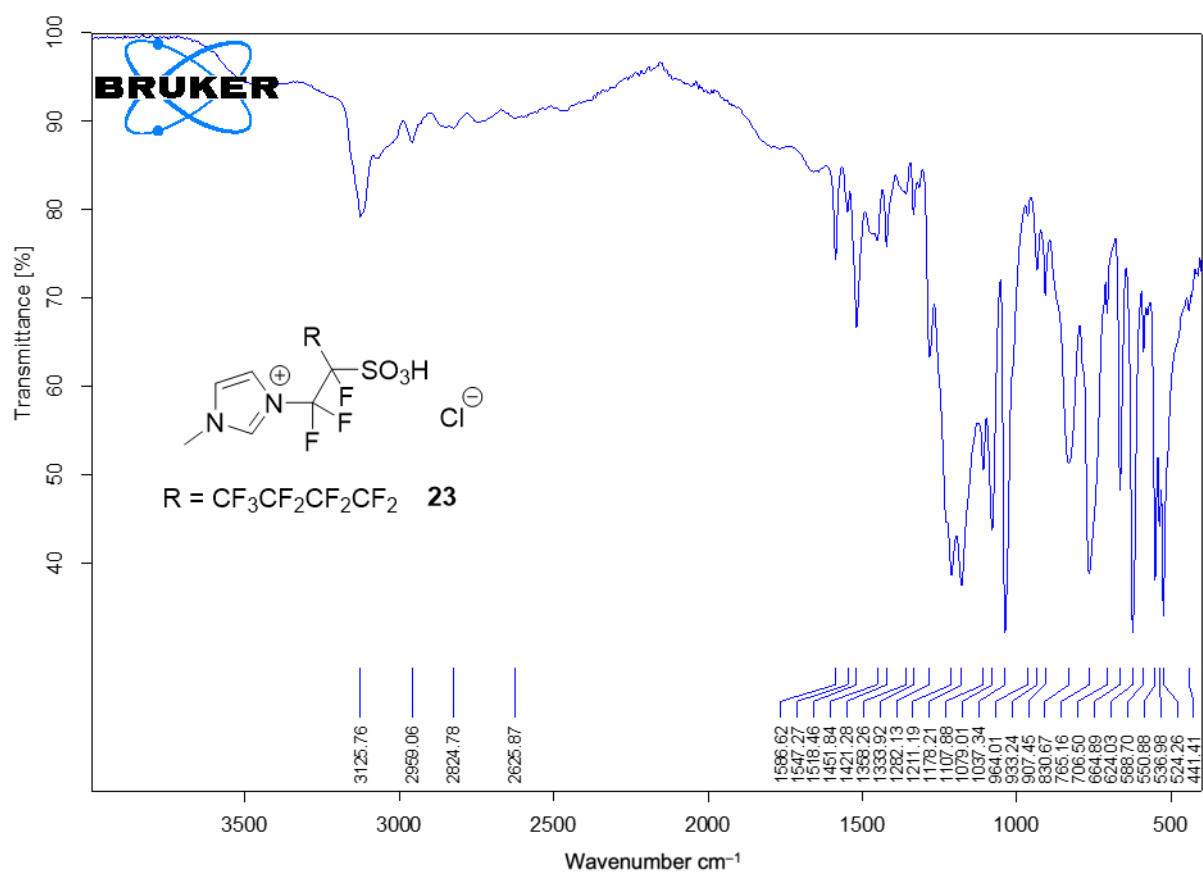
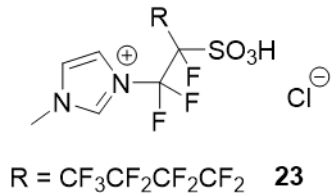


Figure S16. IR spectrum of IL II (**23**)



17

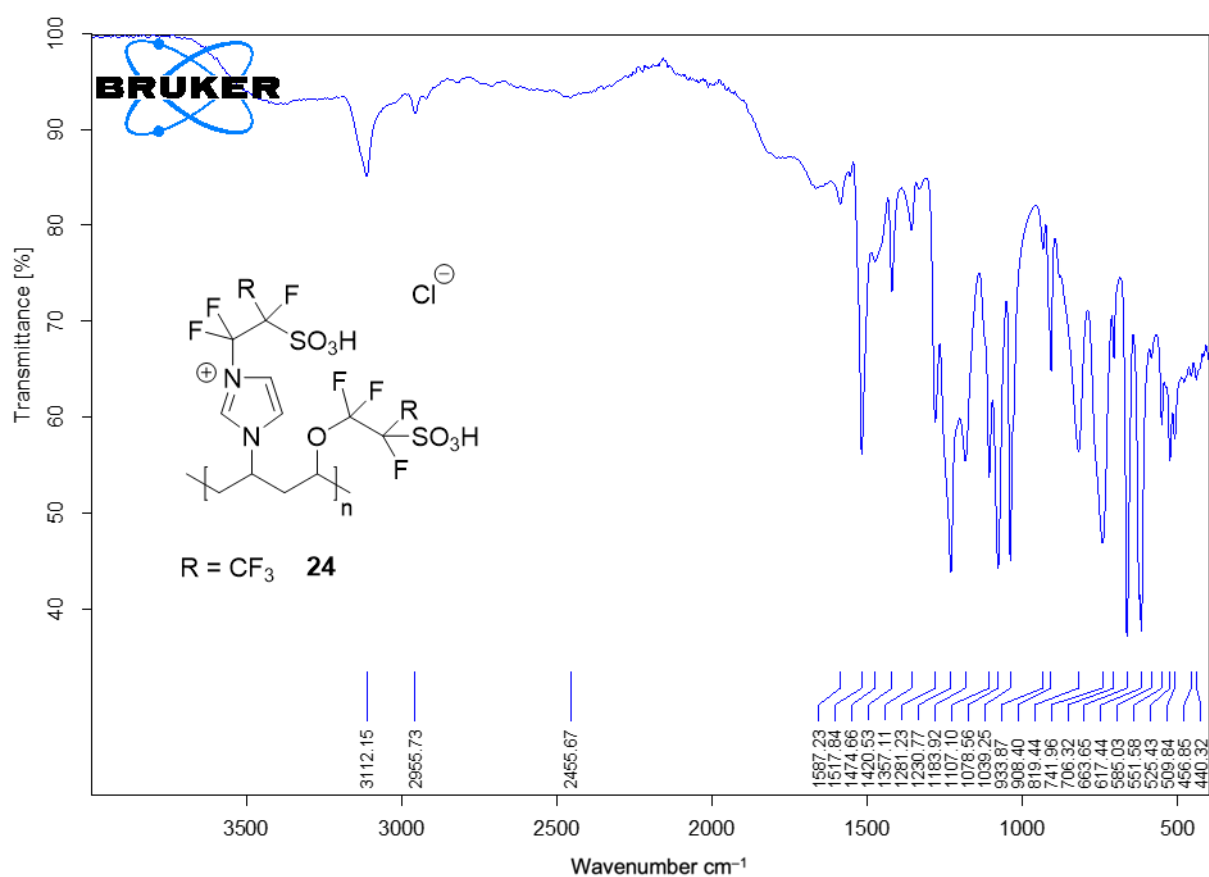


Figure S18. IR spectrum of copolymer IV (Co-NVIm-PVA-6F) (24)

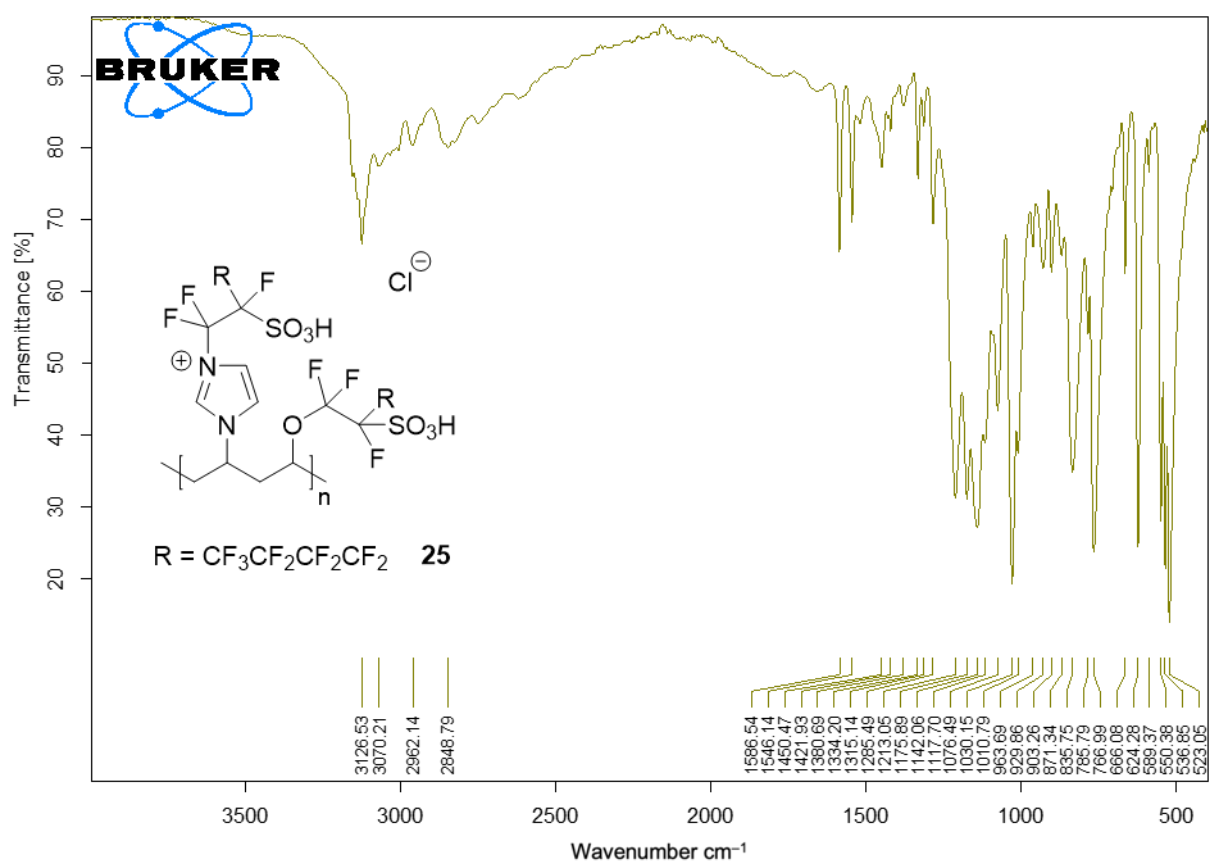


Figure S19. IR spectrum of copolymer V (Co-NVIm-PVA-12F) (25)