Electronic Supplementary Material (ESI) for Polymer Chemistry.


# Supplementary information for: Photolatent Ring-Opening Metathesis Polymerization in Miniemulsion: a Powerful Approach to Produce Polynorbornene Latexes

Loïc Pichavant[1], Patrick Lacroix-Desmazes[2], Abraham Chemtob[3,4], Julien Pinaud[2], and Valérie Héroguez[1*]

[1] Laboratoire de Chimie des Polymères Organiques, CNRS UMR5629, IPB-ENSCBP, Université de Bordeaux, Pessac, France

[2] ICGM Université de Montpellier, CNRS, ENSCM, Montpellier, France

[3] Université de Haute-Alsace, CNRS, IS2M UMR7361, F-68100 Mulhouse, France

[4] Université de Strasbourg, France

CORRESPONDING AUTHOR Valérie Héroguez, Université de Bordeaux, LCPO, UMR 5629, F-33600 Pessac, France. CNRS, LCPO, UMR 5629, F-33600 Pessac, France

Tel: +33 (0) 5 40 00 22 28

Fax: +33 (0) 5 40 00 84 87

Email: heroguez@enscbp.fr

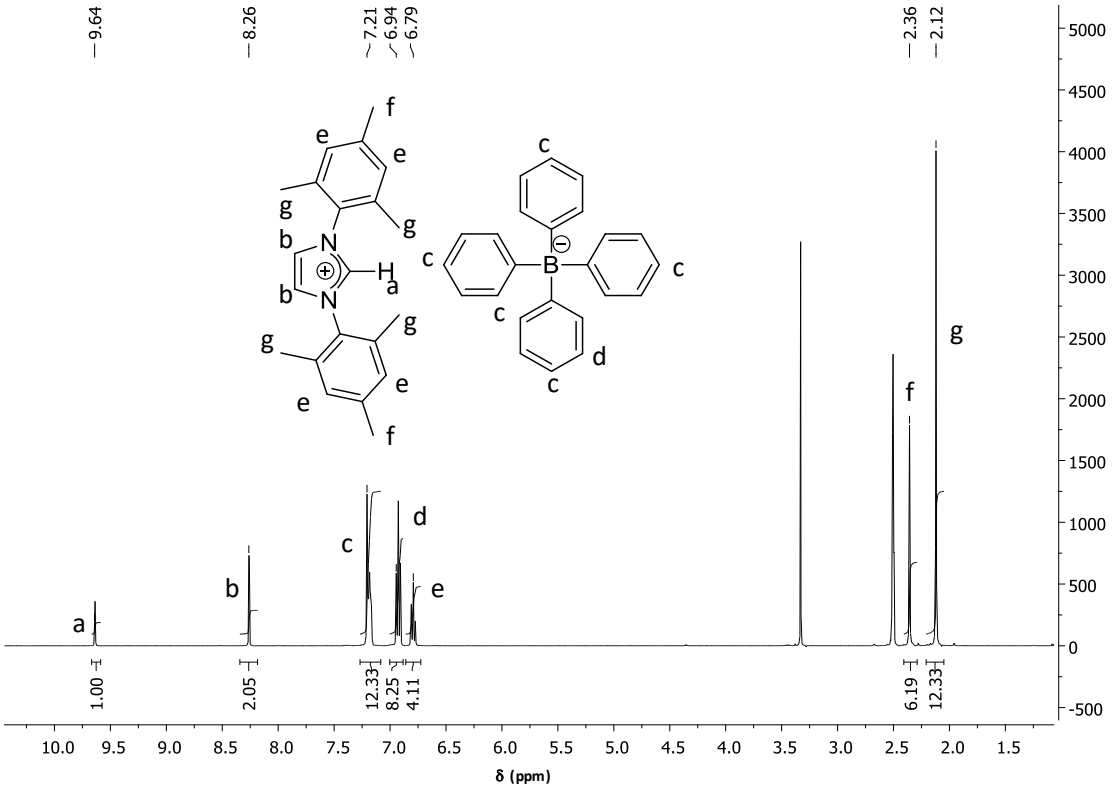


Figure S1: $^{1}$H NMR spectrum in DMSO-*d6* of 1,3-Bis(mesityl)imidazolium tetraphenylborate

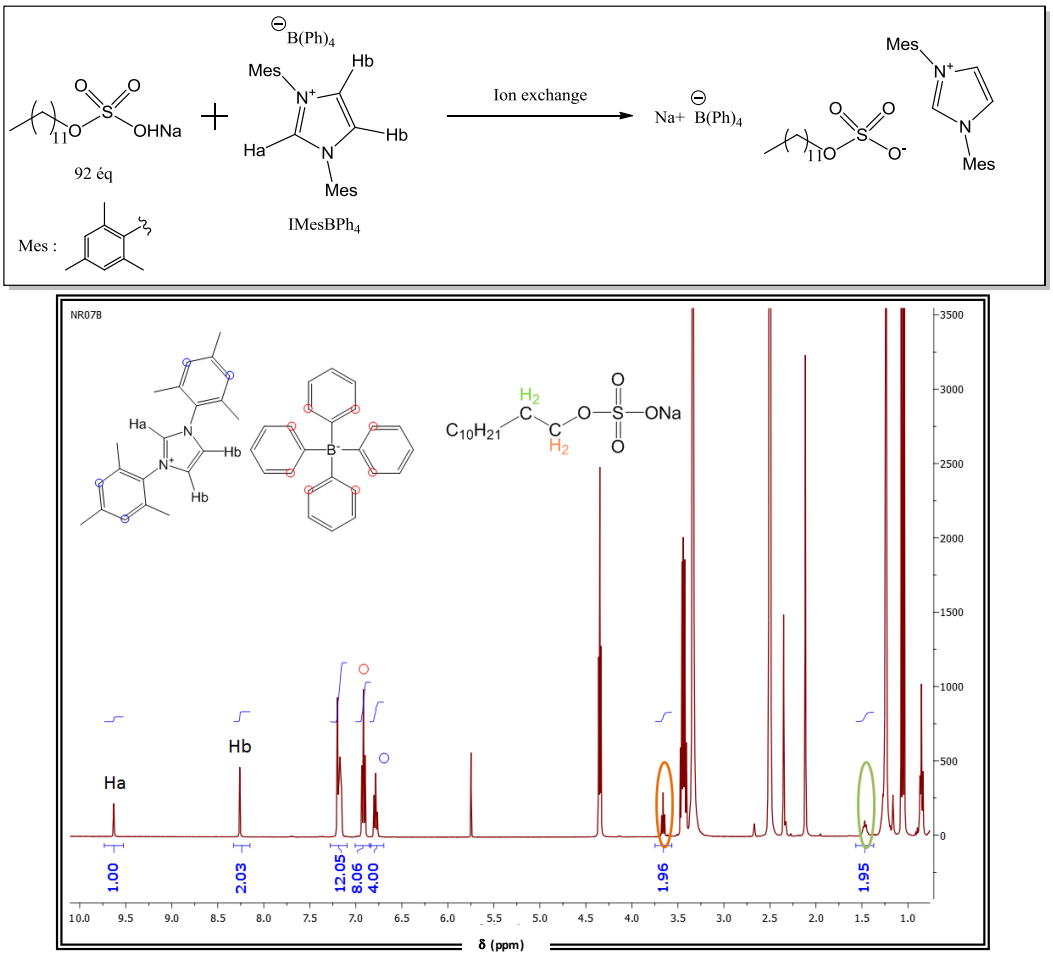


Figure S2: Ion exchange reaction between the NHC photogenerator $IMesH^{+}BPh_4^{-}$ and sodium docecyl sulfate and $^{1}H$ NMR spectrum in DMSO-*d6* of the formed precipitate

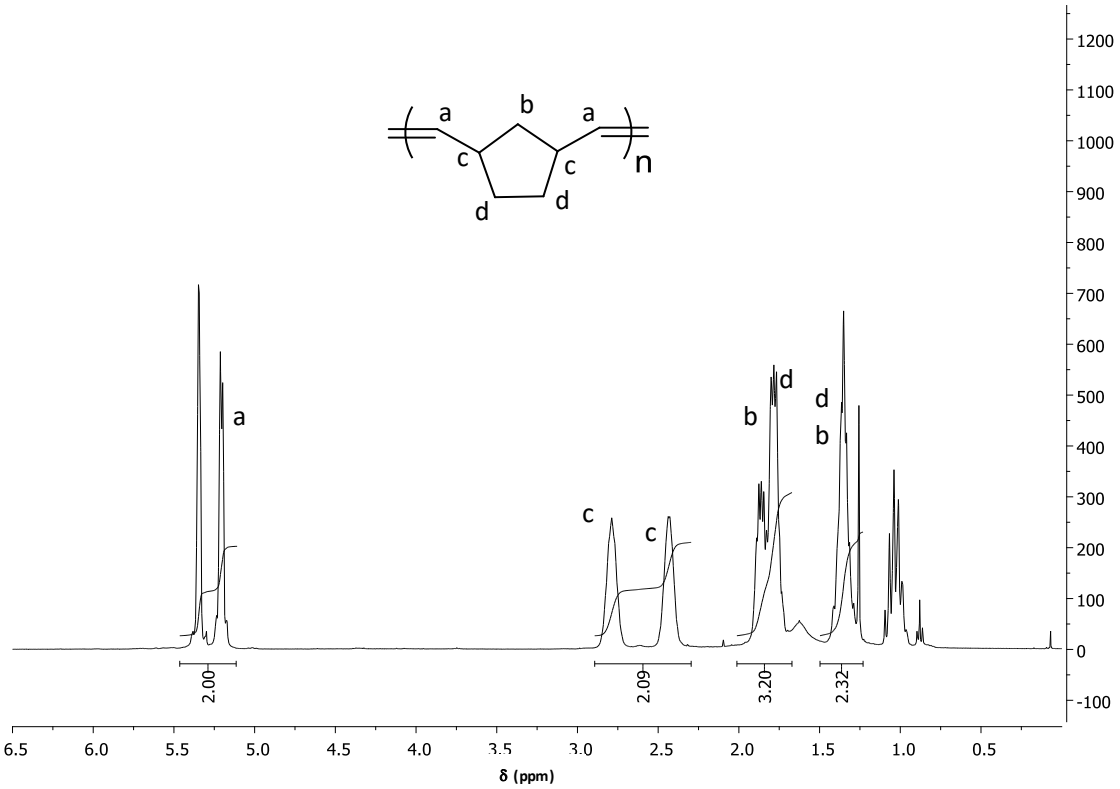


Figure S3: $^{1}H$ NMR spectrum in $CDCl_3$ of the polynorbornene obtained with the catalytic system $IMesBPh_4$/ITX/$[RuCl_2(pCy)]_2$ in solution (irradiation time: 15 min)

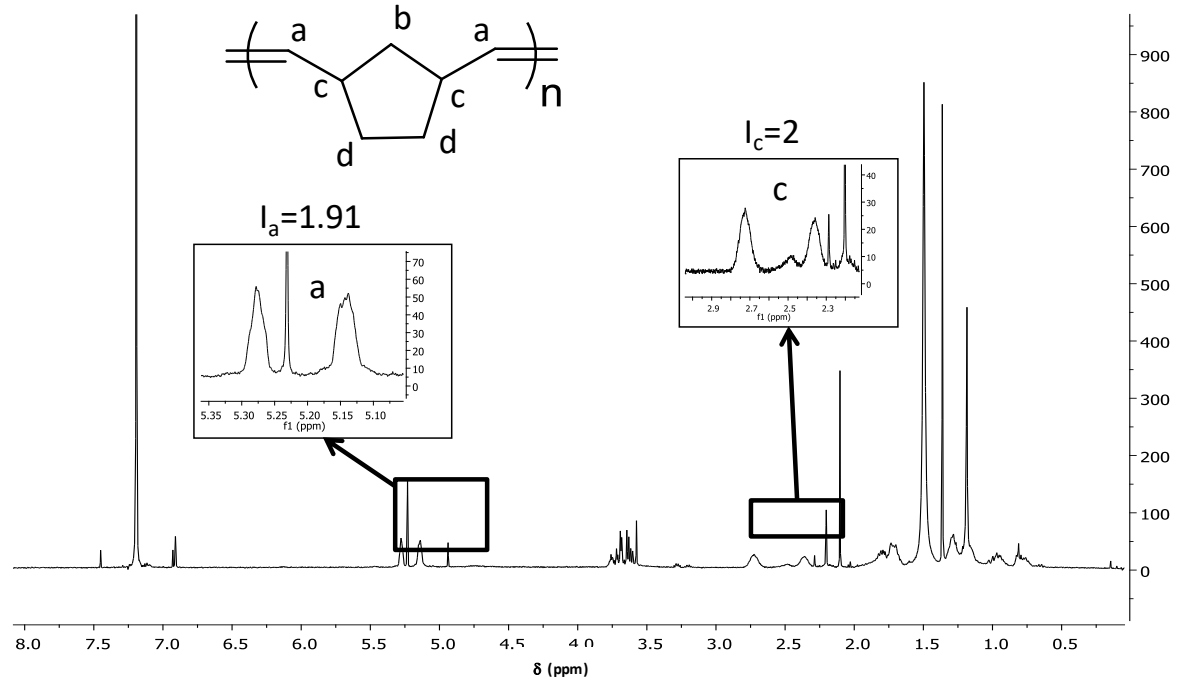


Figure S4: $^{1}H$ NMR spectrum in $CDCl_3$ of the polynorbornene obtained with the catalytic system $IMesBPh_4$/ITX/$[RuCl_2(pCy)]_2$ in miniemulsion 10 w/w-% (irradiation time: 15 min)

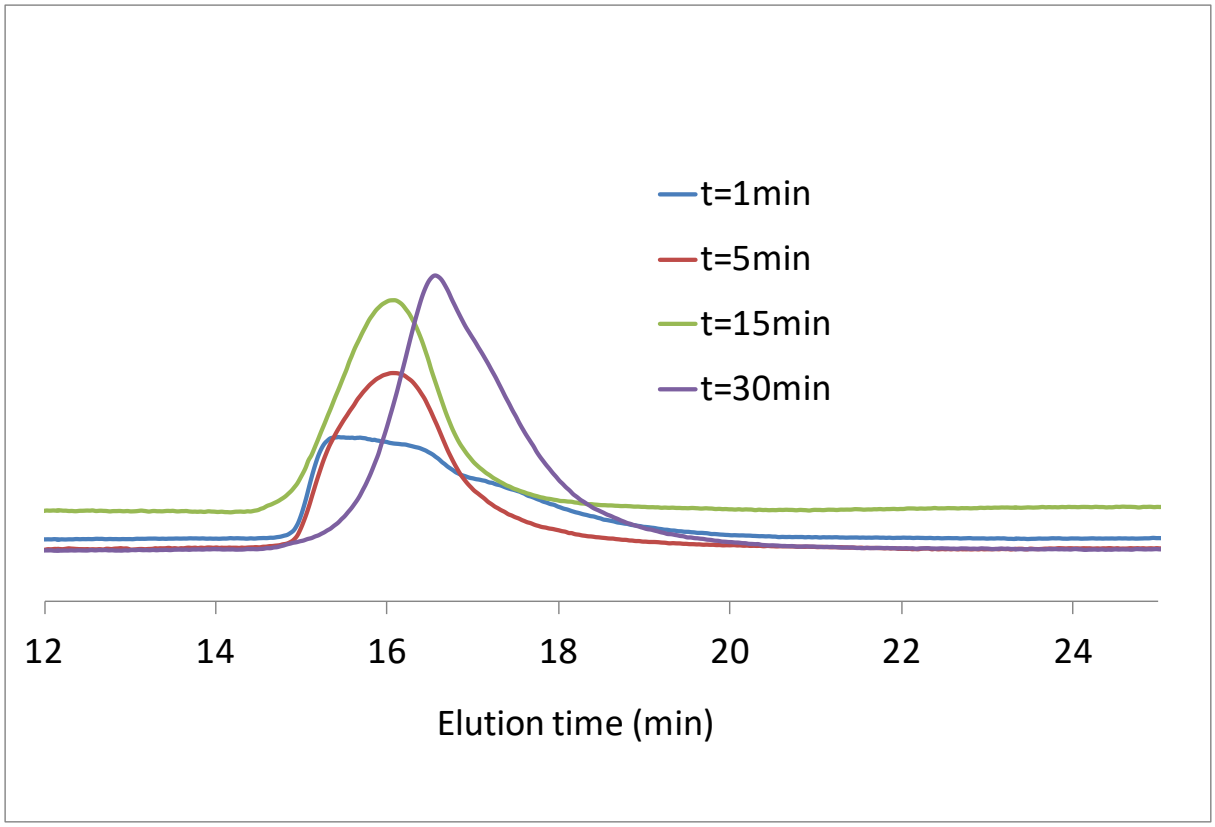


Figure S5: Examples of SEC traces for polymers obtained in solution (catalytic system $IMesBPh_4/ITX/[RuCl_2(pCy)]_2$)

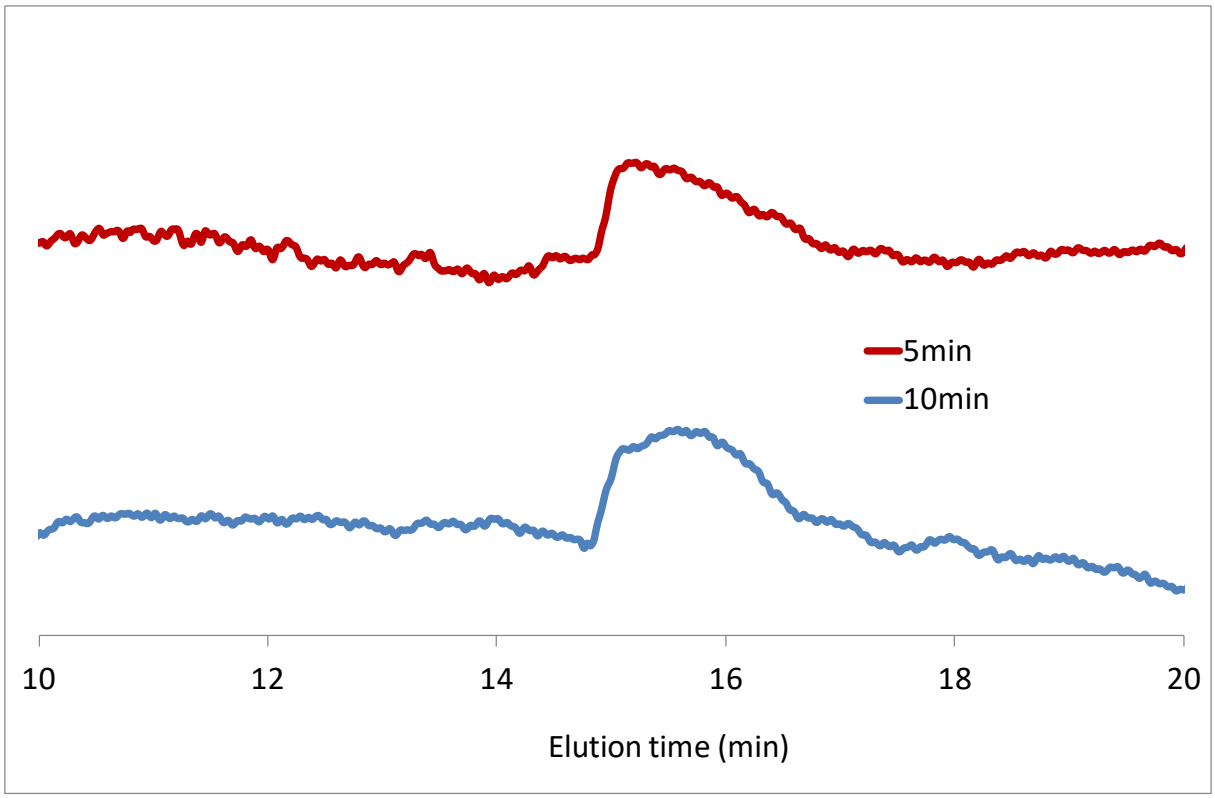


Figure S6: Examples of SEC traces for polymers obtained in miniemulsion 10 w/w-% (catalytic system $IMesBPh_4/ITX/[RuCl_2(pCy)]_2$)

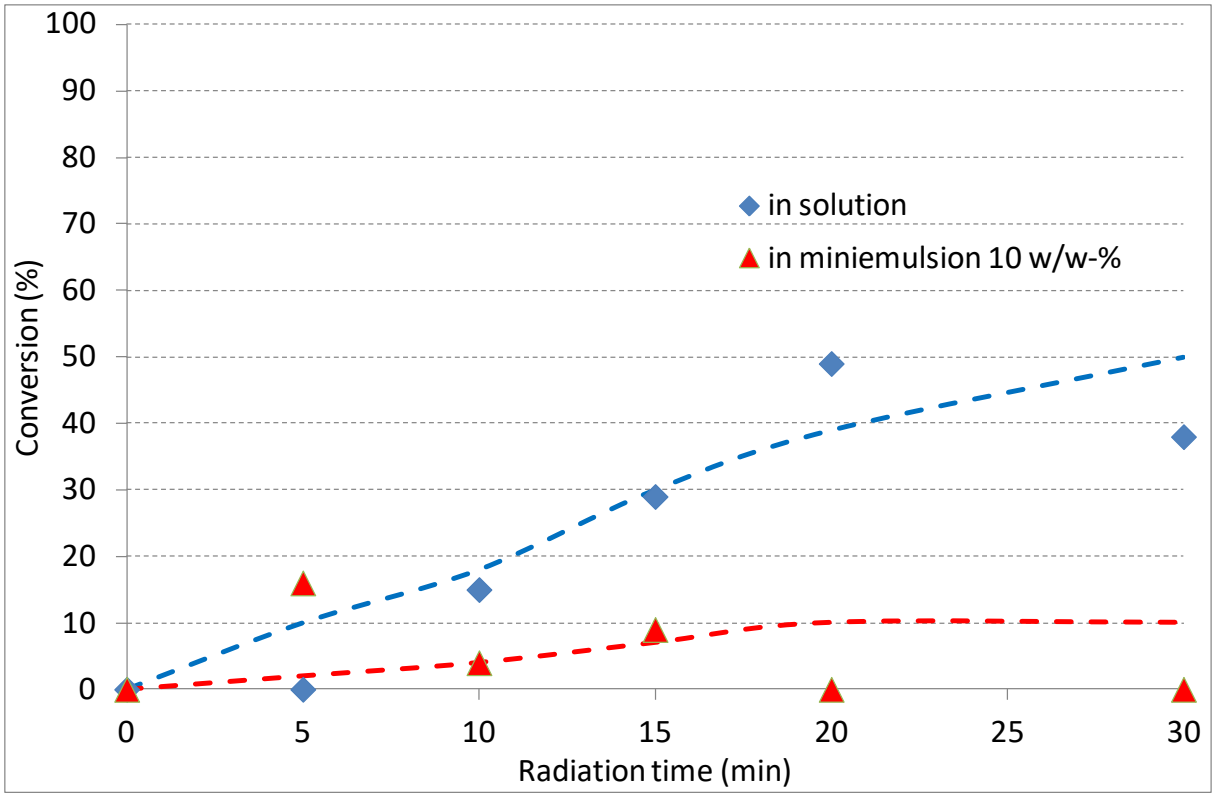


Figure S7: Nb conversion as a function of the irradiation time with $[RuCl_2(pCy)]_2$ alone (without $IMesH^+BPh_4^-$/ITX) in solution (blue curve) and in miniemulsion 10 w/w-% (red curve)