SUPPORTING INFORMATION

Simple pH-Triggered Control over Hydrogel Formation by Acetyl Valine

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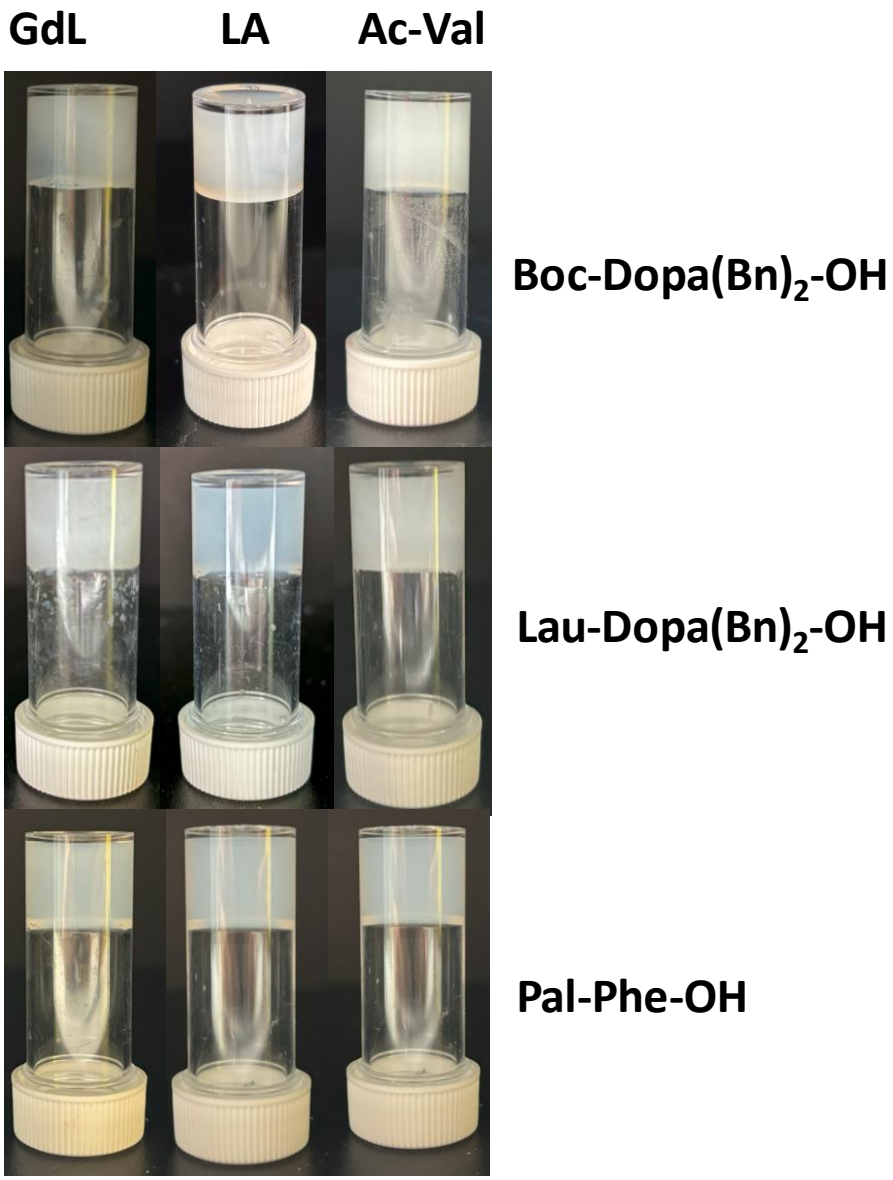


Figure S1. Photographs of gels triggered with 1.3 equiv. of GdL, LA and Ac-Val.

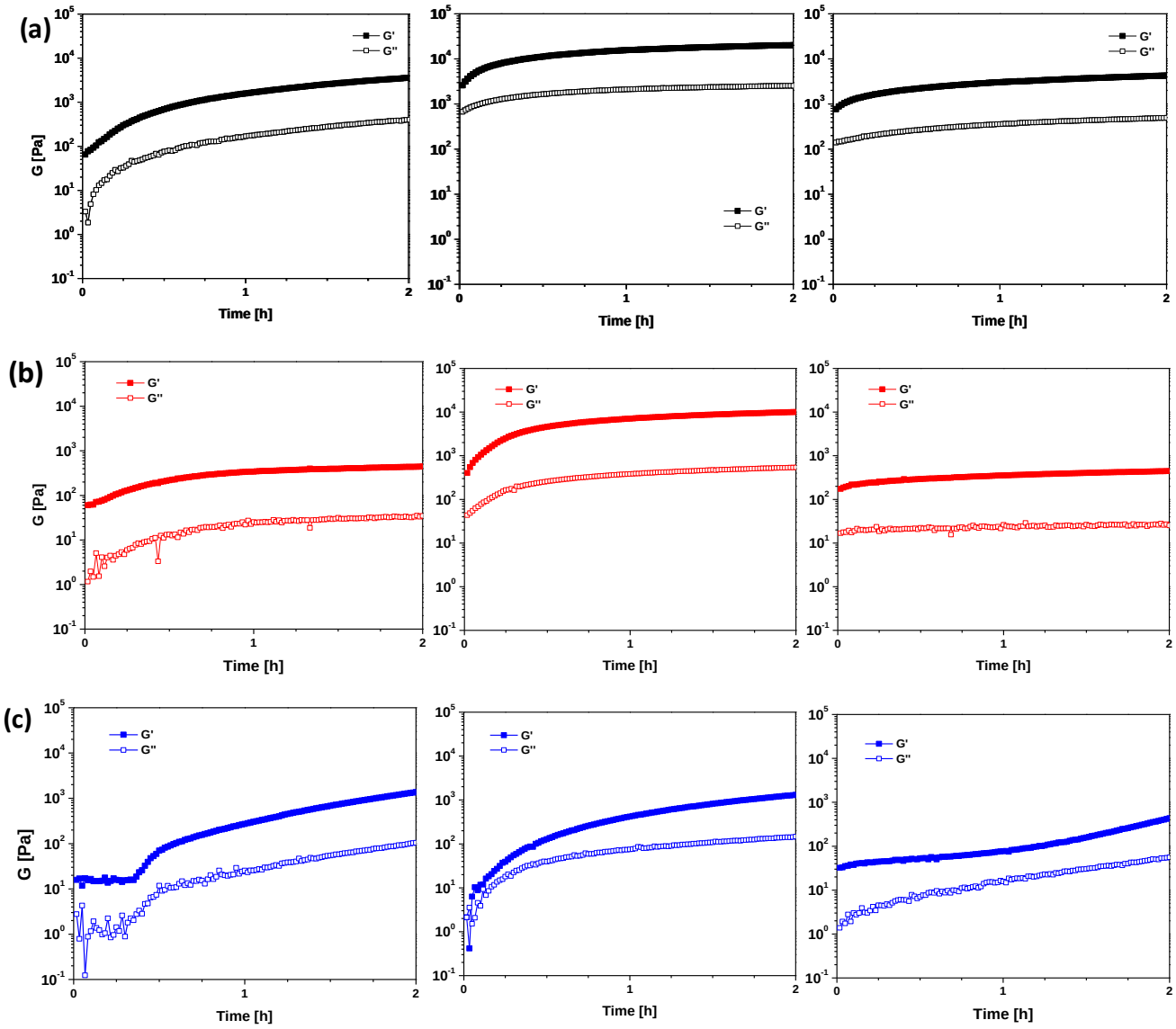


Figure S2. From top to bottom: results for time sweep tests of the hydrogels of Boc-Dopa(Bn)$_2$-OH **A** (black), Lau-Dopa(Bn)$_2$-OH **B** (red) and Pal-Phe-OH **C** (blue), triggered with GdL (left), LA (middle) and acetyl valine (right), always 1.3 equiv.

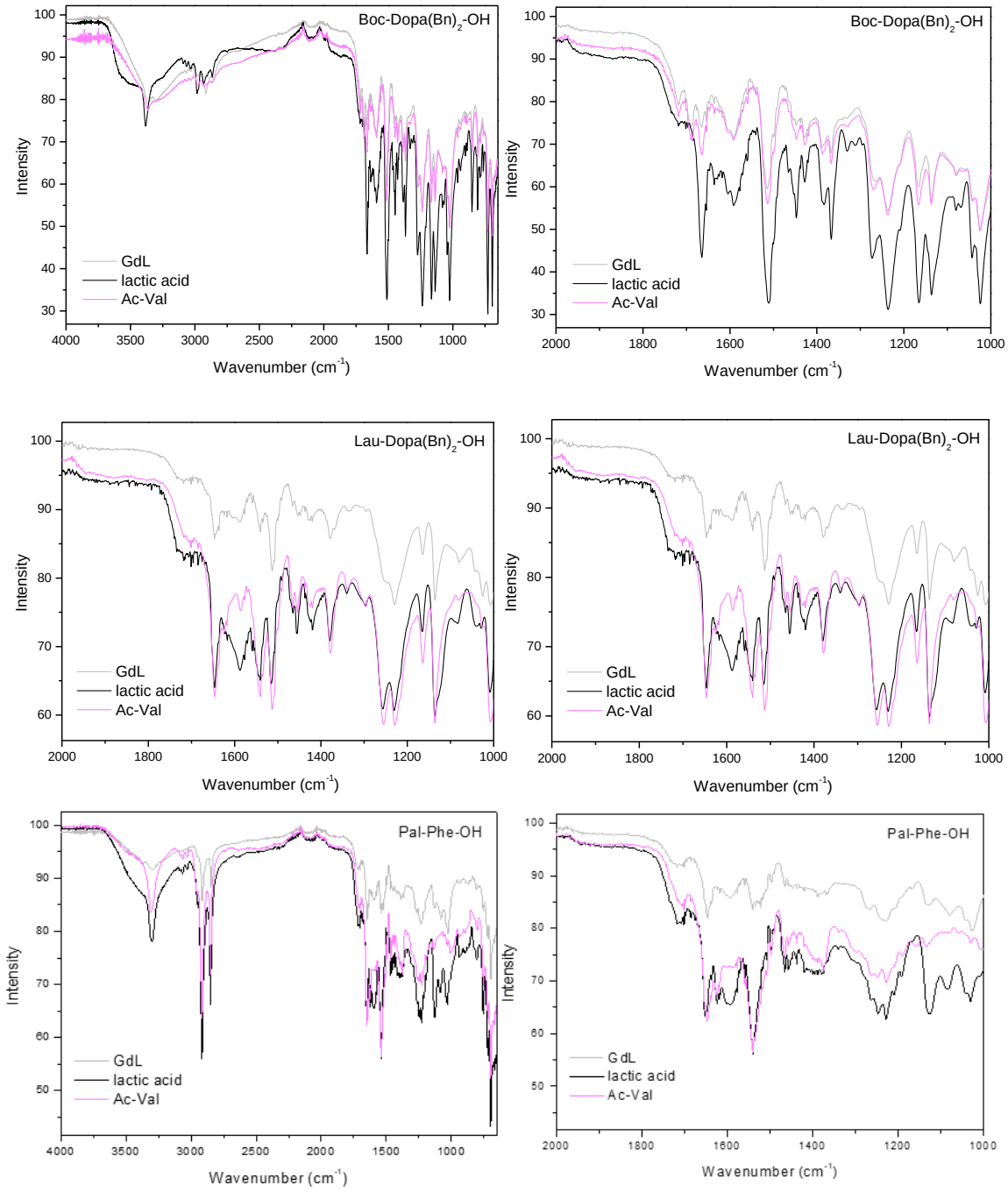


Figure S3. ATR-IR spectra of aerogels obtained with gels triggered with 1.3 equiv. of GdL (grey line), LA (black line) and Ac-Val (purple line). From to top to bottom: Boc-Dopa(Bn)$_2$-OH, Lau-Dopa(Bn)$_2$-OH, Pal-Phe-OH.

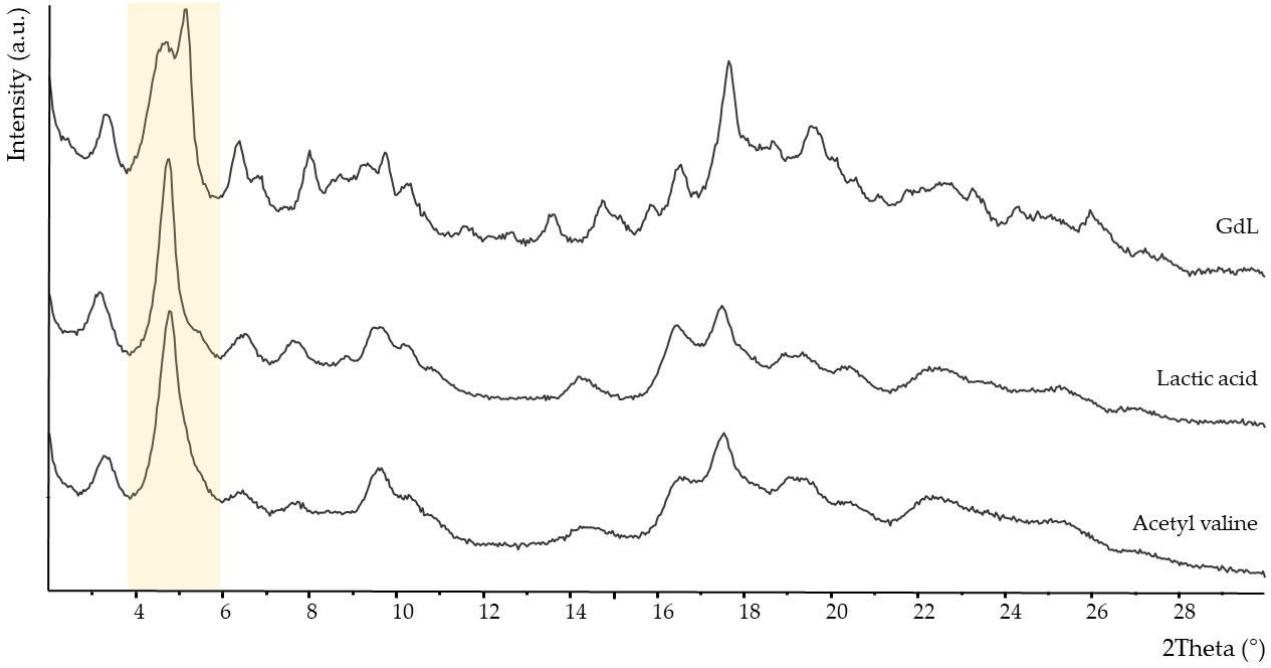


Figure S4. XRPD analyses of Boc-Dopa(Bn)$_2$-OH aerogels obtained with gels triggered with 1.3 equiv. of GdL (top), LA (middle) and Ac-Val (bottom). A yellow section was added to highlight the main diffraction peak.

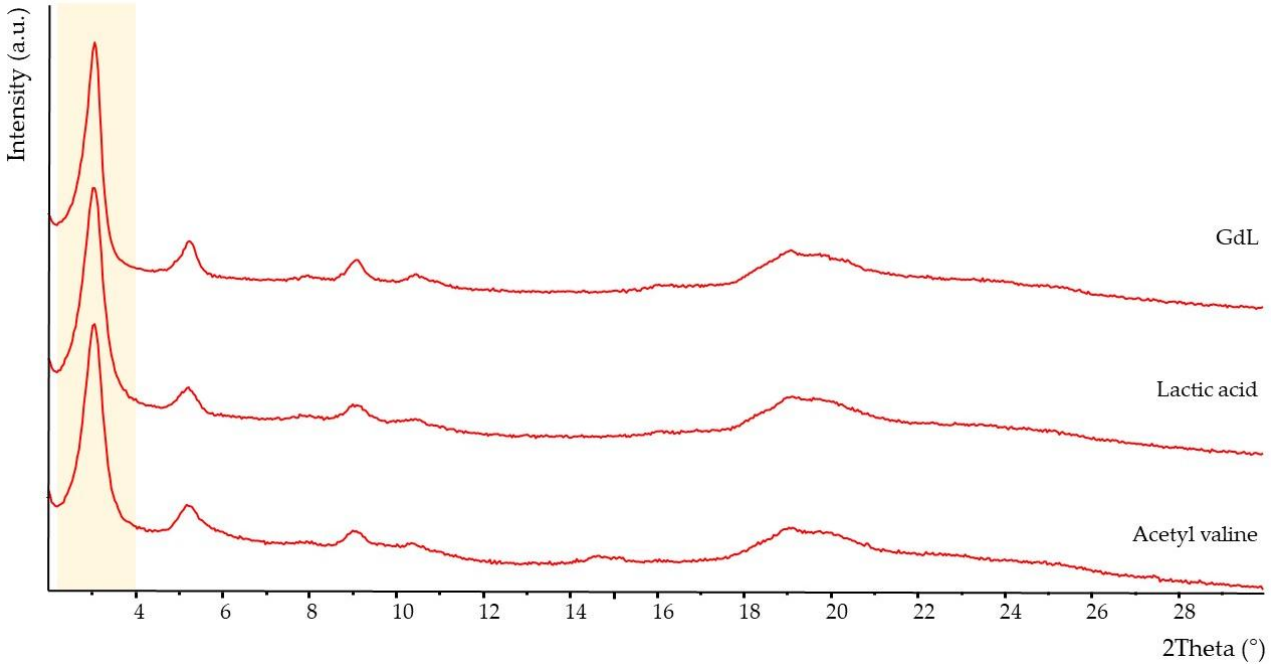


Figure S5. XRPD analyses of Lau-Dopa(Bn)$_2$-OH aerogels obtained with gels triggered with 1.3 equiv. of GdL (top), LA (middle) and Ac-Val (bottom). A yellow section was added to highlight the main diffraction peak.

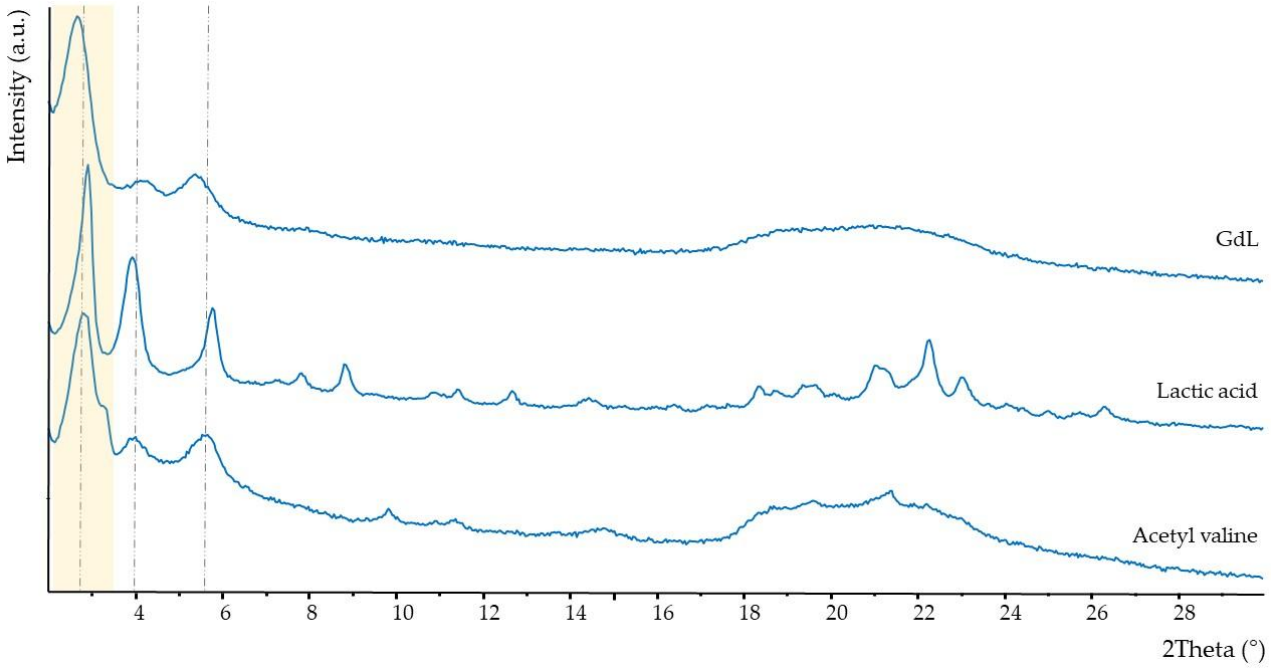


Figure S6. XRPD analyses of Pal-Phe-OH aerogels obtained with gels triggered with 1.3 equiv. of GdL (top), LA (middle) and Ac-Val (bottom). A yellow section was added to highlight the main diffraction peak while dashed lines indicate the peak position of the aerogel obtained using Ac-Val where shifts are observed.

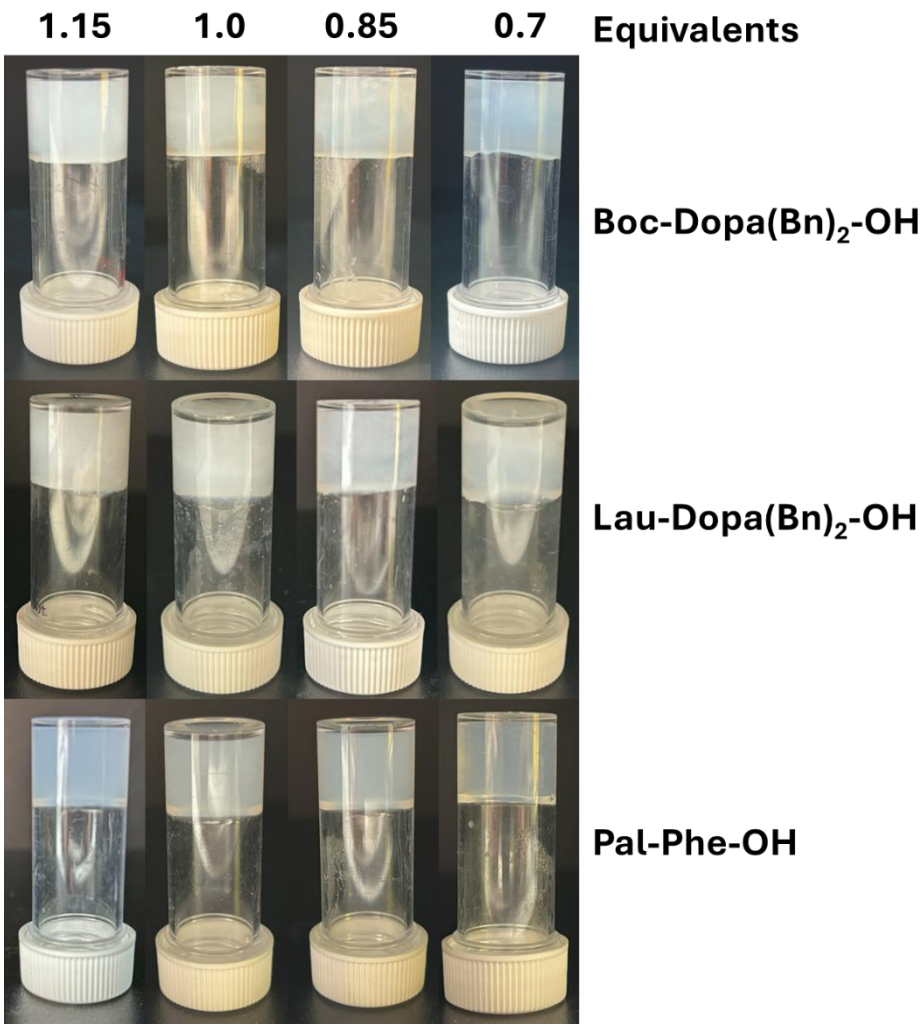


Figure S7. Photographs of gels triggered with decreasing equivalents of Ac-Val

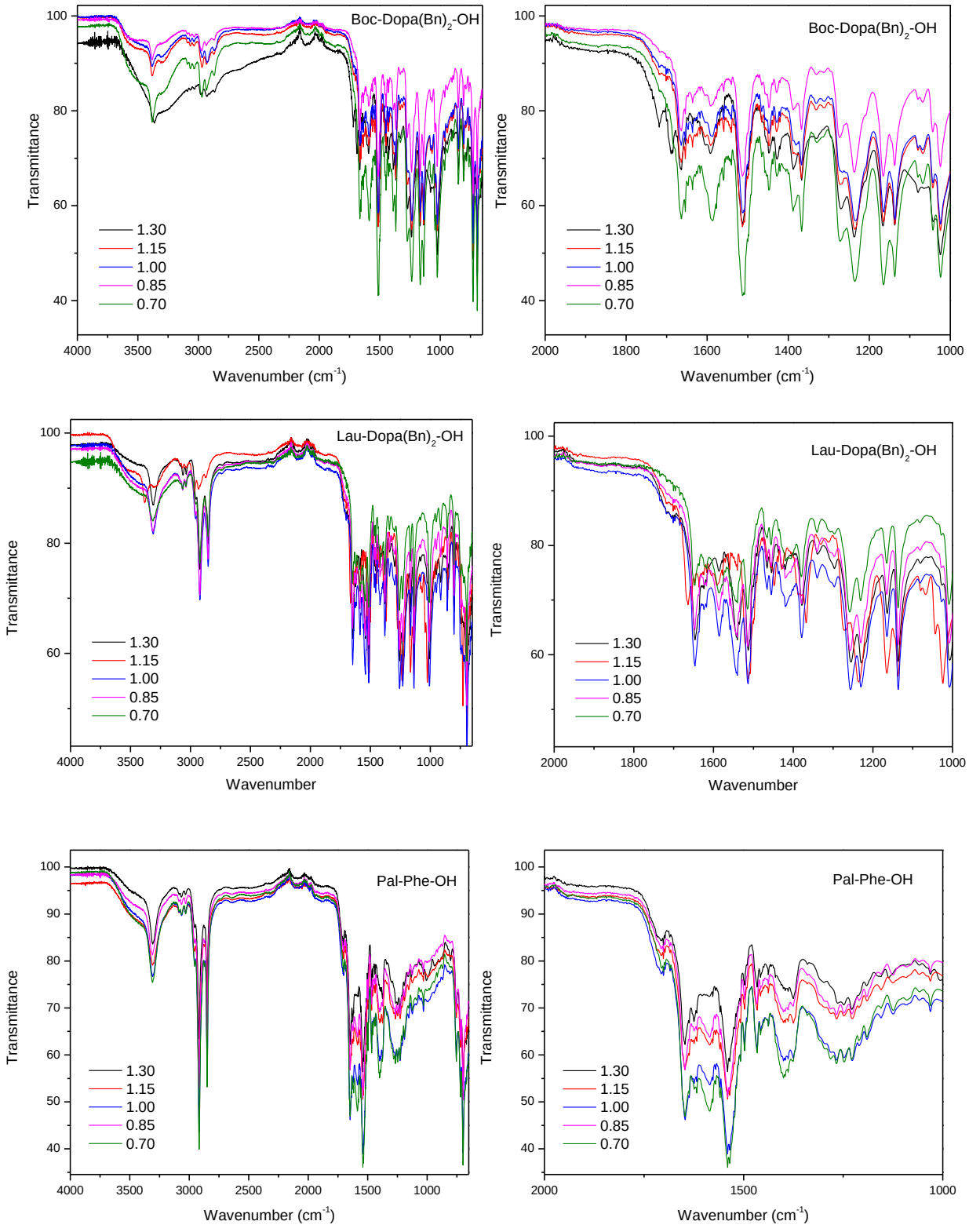


Figure S8. ATR-IR spectra of aerogels obtained with gels triggered with decreasing equivalents of Ac-Val. From to top to bottom: Boc-Dopa(Bn)$_2$-OH, Lau-Dopa(Bn)$_2$-OH, Pal-Phe-OH.

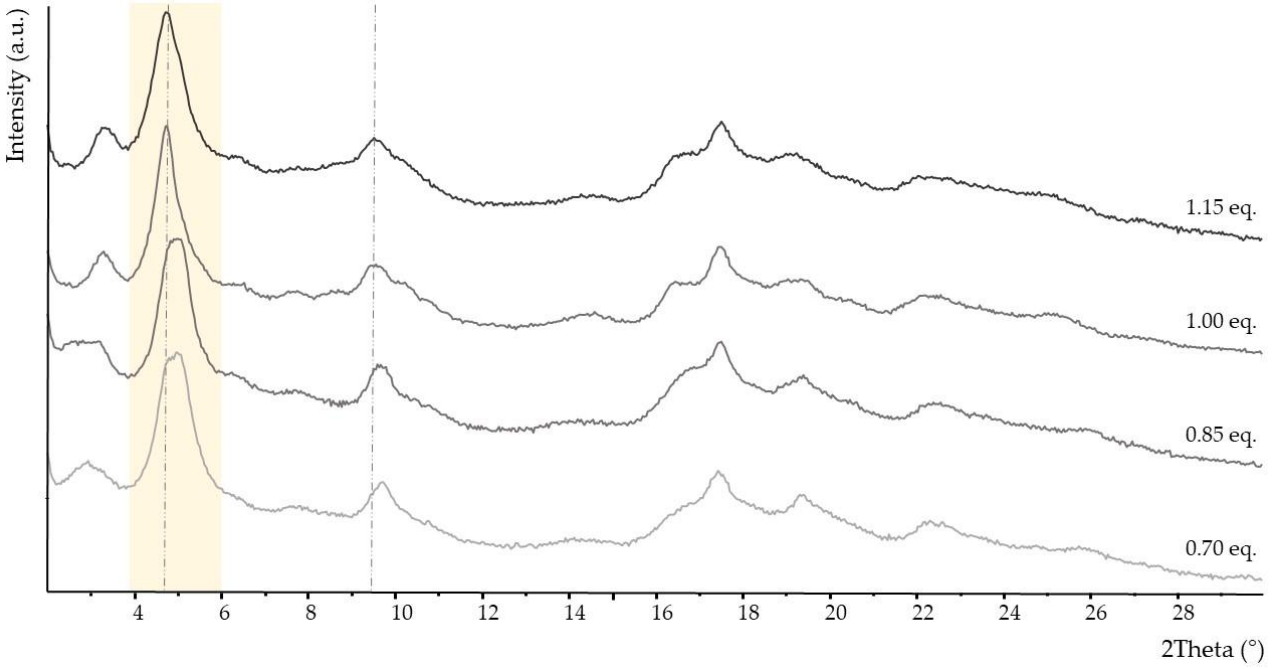


Figure S9. XRPD analyses of Boc-Dopa(Bn)$_2$-OH aerogels obtained with different equivalents of acetyl valine. From top to bottom: 1.15 equivalents, 1.00 equivalents, 0.85 equivalents, and 0.70 equivalents. A yellow section was added to highlight the main diffraction peak while dashed lines indicate the position of peaks of the aerogel obtained using 1.15 eq. where shifts are observed.

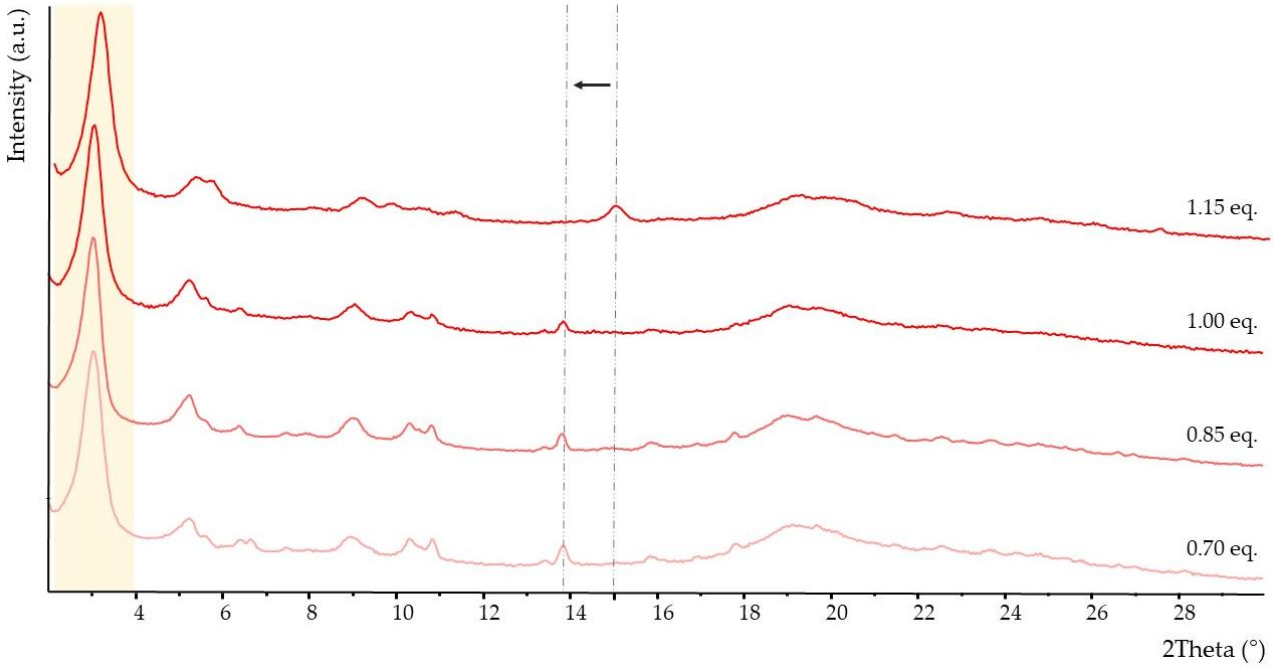


Figure S10. XRPD analyses of Lau-Dopa(Bn)$_2$-OH aerogels obtained with different equivalents of acetyl valine. From top to bottom: 1.15 equivalents, 1.00 equivalents, 0.85 equivalents, and 0.70 equivalents. A yellow section was added to highlight the main diffraction peak while dashed lines indicate the position of peaks of the aerogel obtained using 1.15 eq. where shifts are observed.

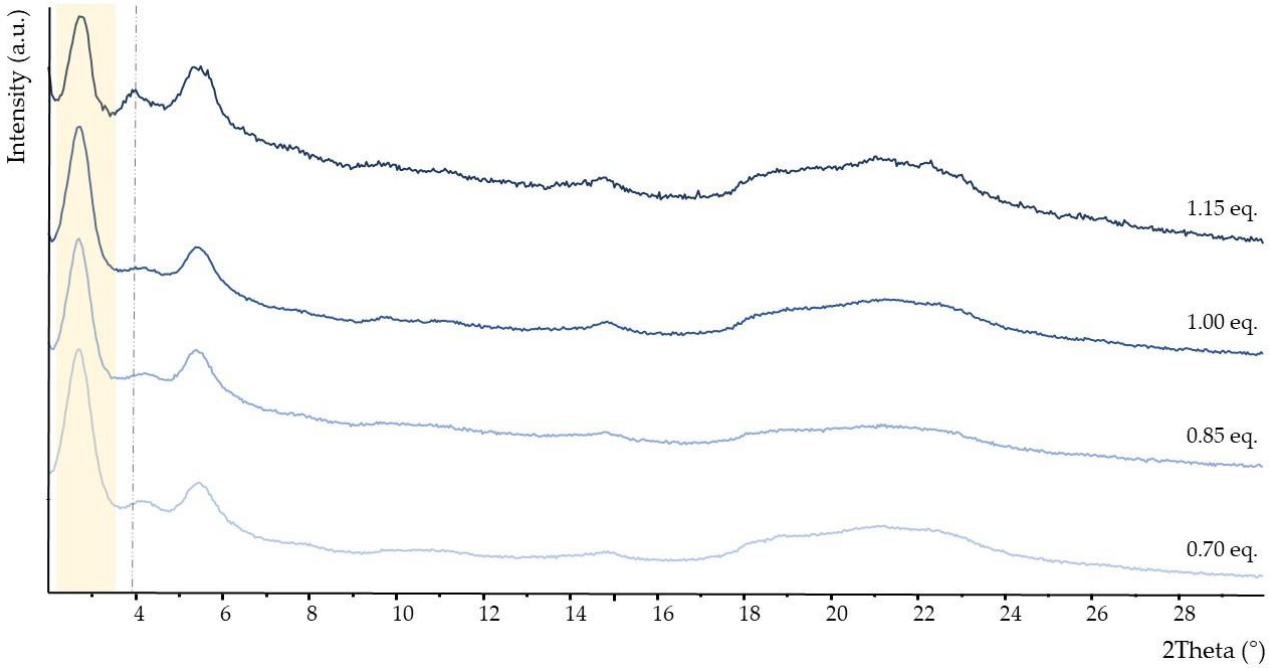


Figure S11. XRPD analyses of Pal-Phe-OH aerogels obtained with different equivalents of acetyl valine. From top to bottom: 1.15 equivalents, 1.00 equivalents, 0.85 equivalents, and 0.70 equivalents. A yellow section was added to highlight the main diffraction peak while dashed lines indicate the position of peaks of the aerogel obtained using 1.15 eq. where shifts are observed.

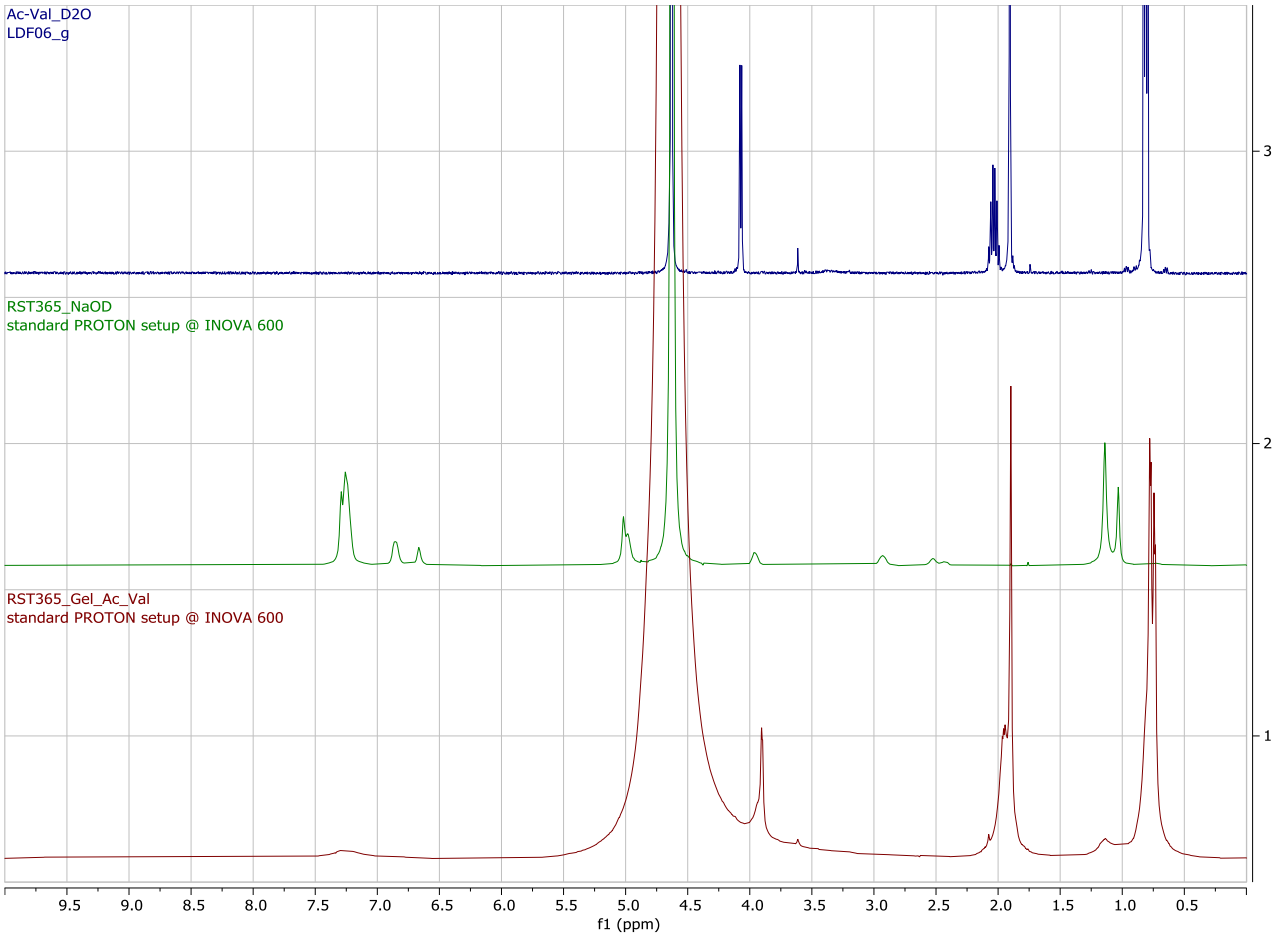


Figure S12. ^{1}H NMR spectra of hydrogels obtained from Boc-L-DOPA(Bn)$_2$-OH triggered with Ac-Val (0.7 equiv.) in D_2O. From top to bottom: solution of Ac-Val in D_2O; solution of Boc-DOPA(Bn)$_2$-OH in D_2O and NaOD; hydrogel obtained adding Ac-Val to the previous solution. The peaks of the gelator disappear while the peaks of Ac-Val are still visible, as the molecule is not involved in the network formation.

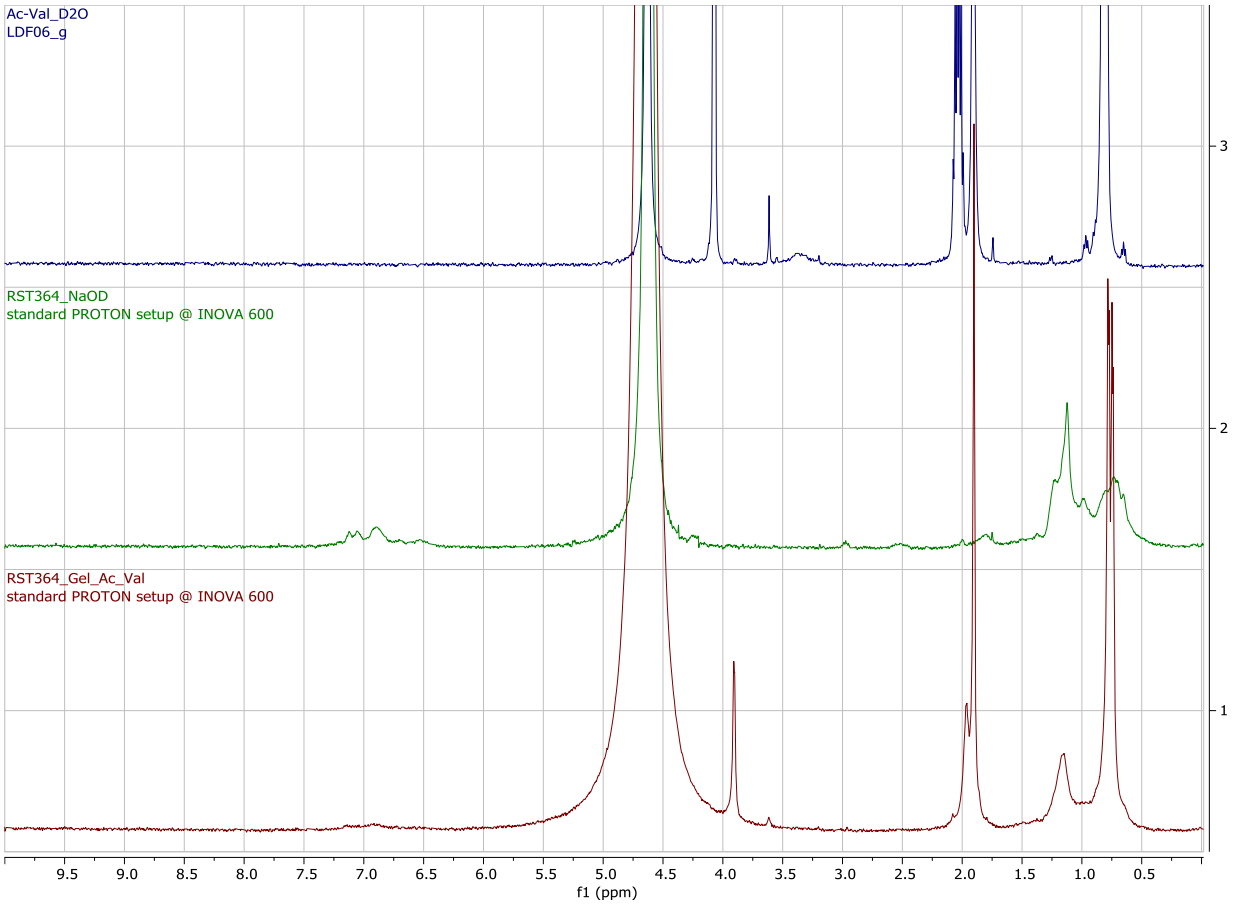


Figure S13. ^{1}H NMR spectra of hydrogels obtained from Lau-Dopa(Bn)$_2$-OH triggered with Ac-Val (0.7 equiv.) in D_2O. From top to bottom: solution of Ac-Val in D_2O; solution of Lau-Dopa(Bn)$_2$-OH in D_2O and NaOD; hydrogel obtained adding Ac-Val to the previous solution. The peaks of the gelator disappear while the peaks of Ac-Val are still visible, as the molecule is not involved in the network formation.

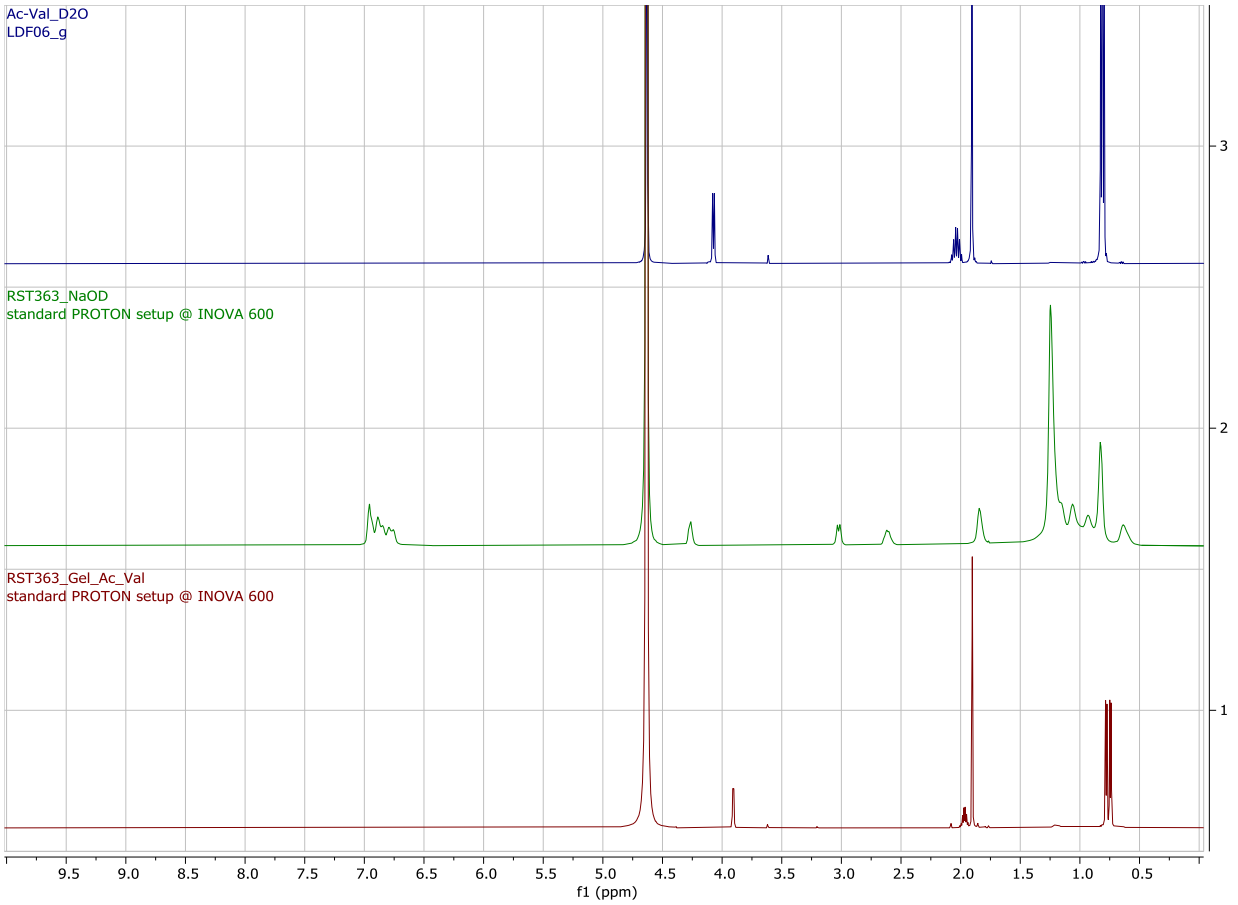


Figure S14. ^{1}H NMR spectra of hydrogels obtained from Pal-Phe-OH triggered with Ac-Val (0.7 equiv.) in D_2O. From top to bottom: solution of Ac-Val in D_2O; solution of Pal-Phe-OH in D_2O and NaOD; hydrogel obtained adding Ac-Val to the previous solution. The peaks of the gelator disappear while the peaks of Ac-Val are still visible, as the molecule is not involved in the network formation.