pharmaceutics

Supplementary Materials: Polymer/Iron-Based Layered Double Hydroxides as Multifunctional Wound Dressings

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Table S1. Elemental chemical composition of M_4FeAl-Cl and M_4FeAl-NAP LDHs (M = Mg^{2+} or Zn^{2+}).

Sample	M/Al	M/Fe	Fe/Al	M / (Fe + Al)	Wt % C	Wt % NAP
Mg_4FeAl-Cl	4.32	4.09	1.06	2.10	----	----
Mg_4FeAl-NAP	4.29	4.10	1.05	2.10	26.64	36.35
Zn_4FeAl-Cl	3.53	3.47	1.02	1.75	----	----
Zn_4FeAl-NAP	3.64	3.53	1.03	1.79	19.41	26.48

Table S2. Peak glass transition ($T_{g\,PE}$), crystallization ($T_{C\,PE}$) and melting ($T_{m\,PE}$) temperatures obtained from DSC analyses of pristine PEBA and PEBA composites.[1.]

Material	$T_{g\,PE}$ (°C)	$T_{c\,PE}$ (°C)	$T_{m\,PE}$ (°C)
PEBA	-60	-14	21
PEBA_NaNAP	-59	-15	20
PEBA_Zn-Cl	-59	-15	20
PEBA_Zn-NAP	-59	-16	20
PEBA_Mg-Cl	-59	-16	21
PEBA_Mg-NAP	-60	-16	19

[1]$T_{g\,PE}$ – glass transition temperature of PE portion, $T_{c\,PE}$ – crystallization temperature of PE portion, $T_{m\,PE}$– melting temperature of PE portion.

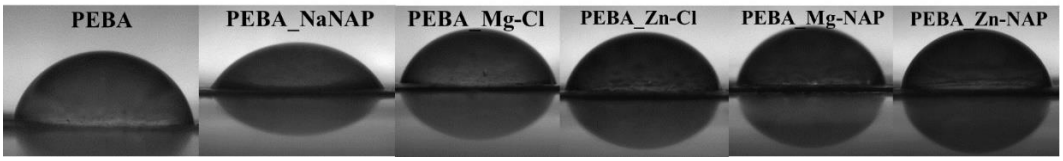


Figure S1. Representative pictures of water static drop deposited on the surface of PEBA and PEBA composite membranes.

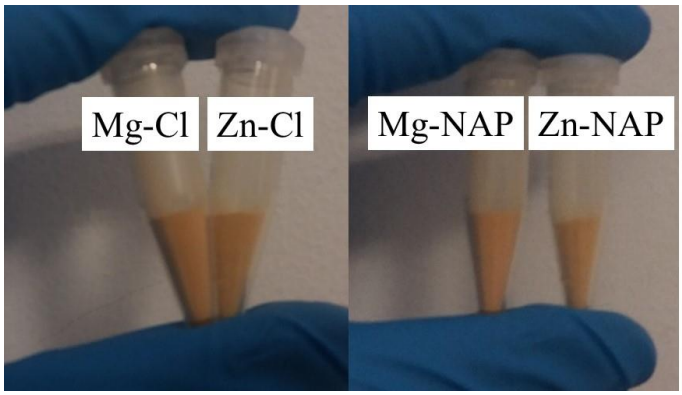
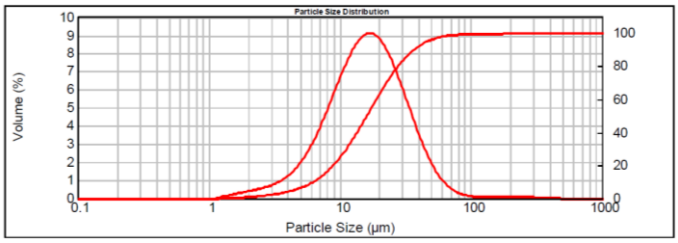


Figure S2. Apparent volume occupied by the same mass of each LDH.

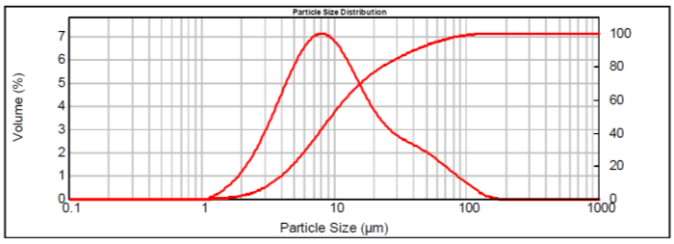
Mg-Cl

d(0.1)= 6.273 µm d(0.5)= 16.093 µm d(0.9)= 36.719 µm



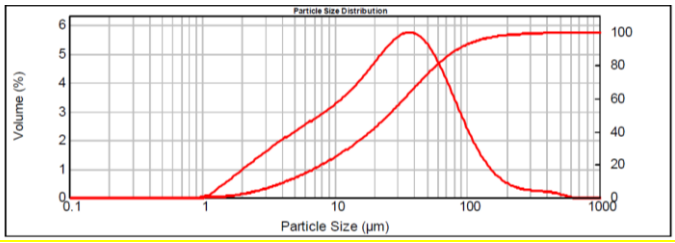
Mg-NAP

d(0.1)= 3.495 µm d(0.5)= 9.631 µm d(0.9)= 41.039 µm



Zn-Cl

d(0.1)= 4.414 µm d(0.5)= 25.617 µm d(0.9)= 86.357 µm



Zn-NAP

d(0.1)= 2.566 µm d(0.5)= 6.928 µm d(0.9)= 35.830 µm

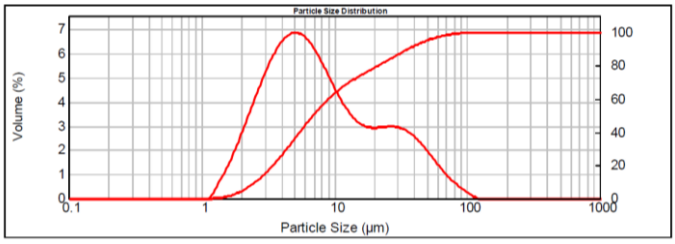


Figure S3. LDHs Particles size distribution in 2-propanol.

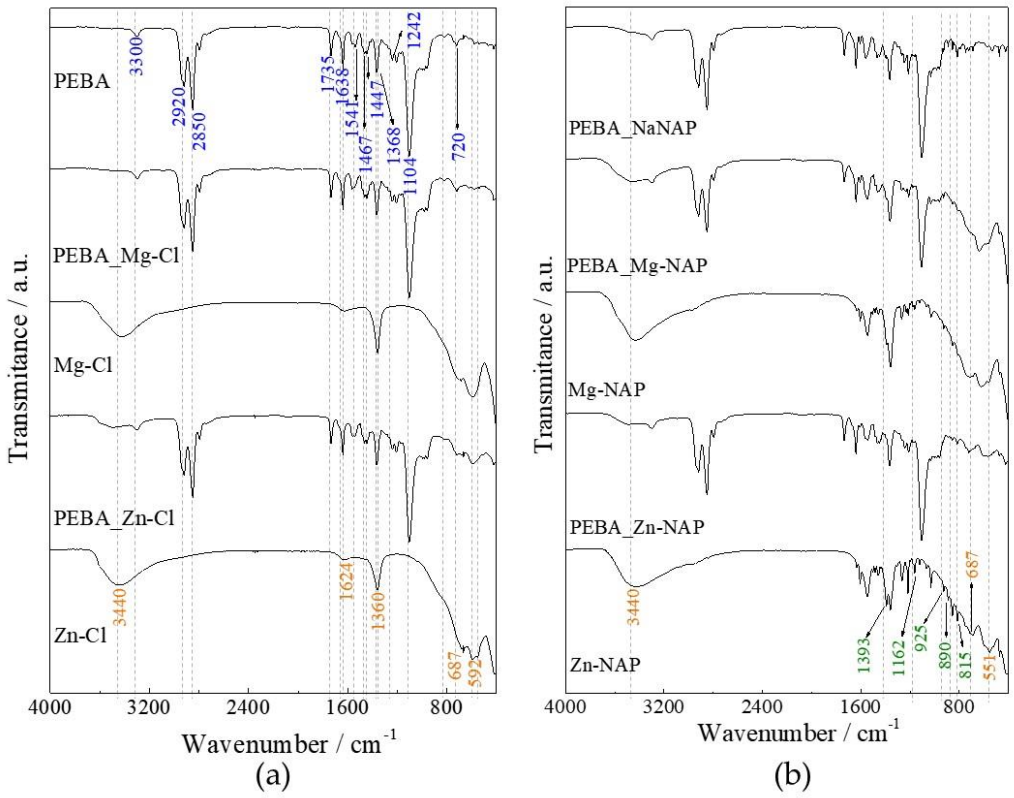


Figure S4. FT-IR spectra of pristine PEBA and PEBA composites containing Cl-LDHs (a) and composites containing the NaNAP salt and hybrid organic-inorganic LDHs (b).

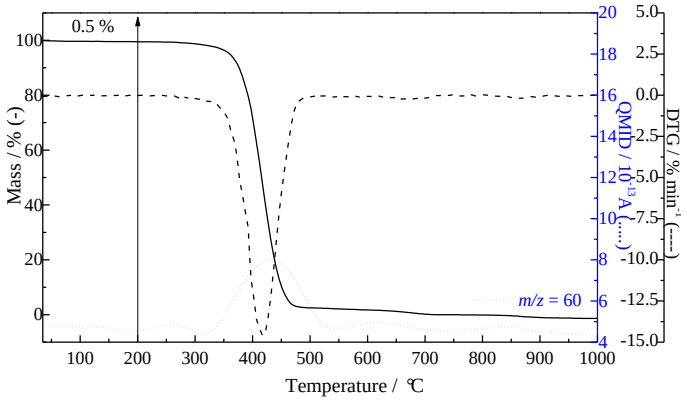


Figure S5. TGA and MS curves of pristine PEBA membrane.

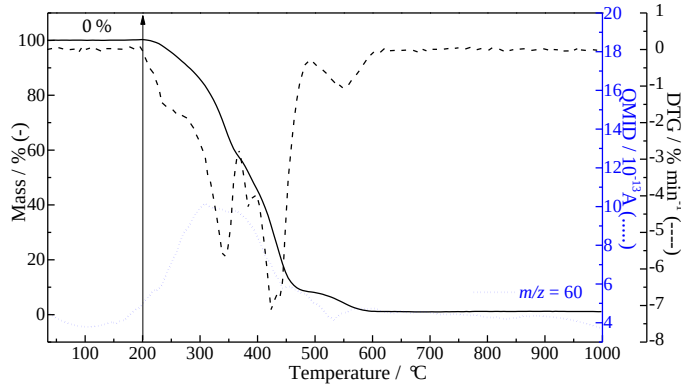


Figure S6. TGA and MS curves of PEBA reagent (beads).