**Supplementary File**

**LDH-FA-T80**

**LDH-FA**

**LDH-T80**

**FA**

**Tween-80**

**LDH**

430

600

1633

1385

3450

Wavenumber/cm-1

4000

3000

2000

1000

1098

1738

2862

2925

3400

1428

1595

1665

1692

3430

2852

2926

3469

1106

1032

2855

2925

3455

1597

1400

1522

1467

3438

1274

821

1218

853

1234

689

806

853

752

1269

**Fig S1.** FTIR spectra of LDH, Tween-80, FA, LDH-T80, LDH-FA and LDH-FA-T80 nanocomposites