**Supplementary Information**

**Sol-Gel Derived Silica/Polyethylene Glycol Hybrids as Potential Oligonucleotide Vectors**

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**Fig S1.** FTIR spectra of a) TEOS, b) PEG and c) Ethanol (EtOH) in 4000-400 cm-1 wavenumber range.



**Fig S2.** UV-Vis spectra of HG solutions at various concentrations (10-250 µg/mL)

**Table SI.** FTIR absorbance bands

|  |  |  |
| --- | --- | --- |
| **TEOS** | **EtOH** | **PEG** |
| **#** | **Band**  | **Assignment** 1,2 | **#** | **Band**  | **Assignment**1,2 | **#** | **Band**  | **Assignment**2–5 |
| **1** | 2976 | -OH stretching | **1** | 3320 | -OH stretching | **1** | 3450 | -OH stretching |
| **2** | 2930 | Asym. C-H stretching (CH3) | **2** | 2975 | Asym. C-H stretching (CH3) | **2** | 2860 | Asym. C-H stretching (CH2) |
| **3** | 2888 | Asym. C-H stretching (CH2) | **3** | 2880 | Asym. C-H stretching (CH2) | **3** | 1455 | Asym. C-H bending |
| **4** | 1445 | Asym. C-H bending(CH3) | **4** | 1380 | Sym. C-H bending | **4** | 1350 | C-H bending |
| **5** | 1390 | Sym. C-H bending | **5** | 1085 | Asym. C-O stretching | **5** | 1250 | Alcohol C-O stretching |
| **6** | 1290 | C-H twist(CH2) | **6** | 1040 | Sym. C-O stretching | **6** | 1090 | Sym. C-O-C ether stretching |
| **7** | 1160 | C-H rocking (CH3) | **7** | 880 | CH3/CH2 def. | **7** | 935 | C-C stretching |
| **8** | 1075 | Sym. C-O stretching | **8** | 630 | **-** | **8** | 530 | - |
| **9** | 970 | C-H rocking (CH3) | **9** | 430 | O-C-C def. |  |
| **10** | 790 | Asym. Si-O-Si stretching,C-H rocking (CH2) |  |
| **11** | 475 | O-C-C def. |  |

*Asym: asymmetric; Sym: symmetric*

**References**

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