Table S1. (a) XRD peaks of untreated kaolin.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Angle (**°2q | 8.871 | 12.343 | 17.777 | 19.942 | 21.272 | 24.860 | 25.262 |
| **Net Intensity** | 448.663 | 12739.4 | 230.119 | 2398.22 | 1670.22 | 13469.3 | 1716.28 |
| **Angle (**°2 | 26.792 | 34.967 | 35.928 | 37.695 | 38.453 | 39.222 | 41.148 |
| **Net Intensity** | 836.667 | 1573.38 | 1613.15 | 1530.47 | 2189.57 | 1113.03 | 193.147 |
| **Angle (**°2 | 45.516 | 47.951 | 49.381 | 50.131 | 50.996 | 54.419 | 55.113 |
| **Net Intensity** | 574.627 | 457.529 | 101.888 | 157.444 | 499.431 | 370.667 | 761.912 |
| **Angle (**°2 | 62.286 | 65.101 | 70.205 | 72.244 | 73.632 | 77.116 |
| **Net Intensity** | 1755.86 | 119.355 | 127.676 | 186.589 | 201.720 | 197.736 |

Table S1 (b) XRD peaks of kaolin treated with nano-calcium carbonate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Angle (**°2 | 8.851 | 12.326 | 19.873 | 21.212 | 24.844 | 25.248 | 26.745 |
| **Net Intensity** | 239.513 | 8987.23 | 2936.28 | 1731.91 | 10422.8 | 1686.13 | 566.005 |
| **Angle** | 29.384 | 34.954 | 35.931 | 37.671 | 38.435 | 39.223 | 41.195 |
| **Net Intensity** | 339.447 | 1631.94 | 1668.60 | 1159.55 | 2168.19 | 1110.51 | 196.427 |
| **Angle** | 45.464 | 47.959 | 50.969 | 54.430 | 55.175 | 62.289 | 73.625 |
| **Net Intensity** | 595.947 | 439.615 | 403.840 | 376.746 | 712.245 | 1784.22 | 228.179 |

Table S1(c).XRD peaks of kaolin treated with silica.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Angle** (°2 | 8.931 | 12.405 | 17.847 | 20.016 | 21.294 | 24.933 | 25.332 |
| **Net Intensity** | 182.099 | 8642.86 | 80.3665 | 2101.71 | 1531.59 | 9261.34 | 1427.68 |
| **Angle** | 26.709(°2 | 35.045 | 36.005 | 37.768 | 38.521 | 39.298 | 41.256 |
| **Net Intensity** | 489.349 | 1325.39 | 1389.01 | 1019.71 | 1893.07 | 962.246 | 150.461 |
| **Angle** | 45.605(°2 | 48.013 | 51.052 | 54.489 | 55.200 | 62.369 | 70.241 |
| **Net Intensity** | 451.942 | 340.576 | 366.800 | 331.691 | 643.340 | 1524.99 | 85.7700 |
| **Angle** | 73.688(°2 |
| **Net Intensity** | 220.100 |