**Supplementary material**

Table S1. Effects of temperature burning to adsorption capacity of VNBC with KMnO4

|  |  |  |  |
| --- | --- | --- | --- |
| VNBC sample | mO | VKMnO4 | Adsorption capacity  (mg KMnO4 /g VNBC) |
| 400- 60 | 3 | 50 | < 5,27 |
| 450- 60 | 3 | 50 |
| 500- 60 | 3 | 50 |
| 550- 60 | 3 | 50 |
| 600- 60 | 3 | 50 | > 5,27 |
| 650- 60 | 3 | 50 |
| 700- 60 | 3 | 50 |
| 750- 60 | 3 | 50 |
| 800- 60 | 3 | 50 | < 5,27 |

Table S2. Effects of temperature burning to adsorption capacity of VNBC with methylene blue

|  |  |  |  |
| --- | --- | --- | --- |
| VNBC  Sample | mO | Vmethylene | Adsorption capacity  (mg Methylene/g VNBC) |
| 400- 60 | 3 | 50 | < 1 |
| 450- 60 | 3 | 50 |
| 500- 60 | 3 | 50 |
| 550- 60 | 3 | 50 |
| 600- 60 | 3 | 50 | > 1 |
| 650- 60 | 3 | 50 |
| 700- 60 | 3 | 50 |
| 750- 60 | 3 | 50 |
| 800- 60 | 3 | 50 |

Table S3. Effects of time burning to adsorption capacity of VNBC with KMnO4

|  |  |  |  |
| --- | --- | --- | --- |
| VNBC  Sample | mO | VKMnO4 | Adsorption capacity  (mg KMnO4 /g VNBC) |
| 650- 30 | 3 | 50 | 25,10 |
| 650- 60 | 3 | 50 | 28,89 |
| 650- 90 | 3 | 50 | 33,07 |
| 650- 120 | 3 | 50 | 46,22 |
| 650- 150 | 3 | 50 | 21,05 |
| 650- 180 | 3 | 50 | 14,95 |
| 650- 210 | 3 | 50 | 14,61 |

Table S4. Effects of time burning to adsorption capacity of VNBC with methylene blue

|  |  |  |  |
| --- | --- | --- | --- |
| VNBC  Sample | mO | Vmethylence | Adsorption capacity  (mg Methylene/g VNBC) |
| 650- 30 | 3 | 50 | 7,48 |
| 650- 60 | 3 | 50 | 10,52 |
| 650- 90 | 3 | 50 | 11,44 |
| 650- 120 | 3 | 50 | 15,4 |
| 650- 150 | 3 | 50 | 7,03 |
| 650- 180 | 3 | 50 | 3,43 |
| 650- 210 | 3 | 50 | 2,00 |