***Supplementary Information***

**Review - Safety aspects of sodium-ion batteries: Prospective analysis from 1st generation towards more advanced systems**

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Table S1: Theoretical and Practical capacity of selected materials reported in main paper

|  |  |  |  |
| --- | --- | --- | --- |
| ***Materials*** | ***Theoretical capacity (mAh/g)*** | ***Practical capacity******(mAh/g)*** | ***Sources*** |
| ***Cathode:*** |  |  |  |
| LiCoO2 | 274 | 140-170 typically,190 (dopants) | [1] |
| LiNiO2 | 275 | 180-200 typically,232 (Best performance) | [2] |
| LiMnO2 | 285 | 210 | [3] |
| LiNi0.33Mn0.33Co0.33O2 | 280 | 164 | [4] |
| LiMn2O4 | 148 | 140 | [5] |
| LiFePO4 | 170 | 192 (modified LFP-microrods/multi-walled carbon nanotube) | [6] |
|  |  |  |  |
| Na3V2(PO4)2 | 128 | 120 | [7] |
| NaFeO2 | 242 | 103 | [8] |
| Na2FeP2O7 | 97 | 90 | [9] |
| Na3.32Fe2.11Ca0.23(P2O7)2 | 148 | 100 | [10] |
| Na0.69CoO2 | 173 | 147 (Na0.12CoO2),116 (Na0.24CoO2),49 (Na0.52CoO2) | [11] |
| Na0.44MnO2 | 121 | 108 | [12] |
| NaNi0.33Fe0.33Mn0.33O2 | 282 | 165 | [13] |
| Na0.9[Cu0.22Fe0.30Mn0.48]O2 | 220 | 100 | [14] |
| Na[Ni0.6Co0.2Mn0.2]O2 | 276 | 153 | [15] |
|  |  |  |  |
| ***Anode:*** |  |  |  |
| Graphite | 372 | 348 | [16] |
| Li4Ti5O12 | 175 | 160 | [17] |
|  |  |  |  |
| Hard carbon | Precursors dependent | 361 | [18] |

Table S2: Selected commercial (start-ups) level sodium-ion batteries

|  |  |
| --- | --- |
| ***Company*** | ***Active Materials*** |
| Contemporary Amperex Technology Co., Ltd. (CATL) | Prussian blue analog material||HC |
| Faradion Limited | Layered oxide materials||HC |
| HiNa Battery Technology Co., Ltd. | NaCu1-y-zFeyMnzO2||HC |
| Natron Energy | Prussian blue analog material||HC |
| TIAMAT | Polyanionic material || HC |
| Novasis Energies | Prussian blue analog material||HC |
| Altris AB | Prussian blue analog material||HC |
| Aquion Energy | Mn-oxide intercalation cathode||High-capacity activated anode |

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