Electronic Supplementary Information

**Table-5. Mn-MOF XRD Data**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | 2θ Obs. | 2θ Calc. | Δ2θ = Obs. -Calc | d (Å)  Obs. | I(abs) | I(rel) | h k l |
| 1 | 14.505 | 14.505 | 0.000 | 6.1017 | 1999 | 100 | 0 1 2 |
| 2 | 19.790 | 19.790 | 0.000 | 4.4826 | 657 | 33 | 1 0 4 |
| 3 | 21.321 | 21.321 | 0.000 | 4.1641 | 539 | 27 | 1 1 0 |
| 4 | 23.299 | 23.300 | -0.001 | 3.8147 | 47 | 2 | 0 0 6 |
| 5 | 24.333 | 24.333 | 0.000 | 3.6550 | 579 | 29 | 1 1 3 |
| 6 | 25.884 | 25.884 | 0.000 | 3.4393 | 64 | 3 | 2 0 2 |
| 7 | 29.250 | 29.250 | 0.000 | 3.0508 | 963 | 48 | 0 2 4 |
| 8 | 31.788 | 31.788 | 0.000 | 2.8128 | 625 | 31 | 1 1 6 |
| 9 | 33.067 | 33.067 | 0.000 | 2.7068 | 118 | 6 | 2 1 1 |
| 10 | 33.774 | 33.774 | 0.000 | 2.6518 | 19 | 1 | 1 2 2 |
| 11 | 36.481 | 36.481 | 0.000 | 2.4610 | 184 | 9 | 2 1 4 |
| 12 | 37.375 | 37.376 | -0.001 | 2.4041 | 171 | 9 | 3 0 0 |
| 13 | 38.402 | 38.403 | -0.001 | 2.3422 | 324 | 16 | 1 2 5 |
| 14 | 40.203 | 40.204 | -0.001 | 2.2413 | 162 | 8 | 2 0 8 |
| 15 | 43.173 | 43.173 | 0.000 | 2.0938 | 51 | 3 | 2 1 7 |
| 16 | 43.429 | 43.429 | 0.000 | 2.0820 | 101 | 5 | 2 2 0 |
| 17 | 44.511 | 44.511 | 0.000 | 2.0339 | 159 | 8 | 3 0 6 |
| 18 | 45.102 | 45.102 | 0.000 | 2.0086 | 52 | 3 | 2 2 3 |
| 19 | 46.024 | 46.024 | 0.000 | 1.9705 | 211 | 11 | 3 1 2 |
| 20 | 46.984 | 46.984 | 0.000 | 1.9324 | 74 | 4 | 0 2 10 |
| 21 | 48.151 | 48.151 | 0.000 | 1.8883 | 63 | 3 | 1 3 4 |
| 22 | 49.701 | 49.701 | 0.000 | 1.8329 | 33 | 2 | 3 1 5 |
| 23 | 49.859 | 49.859 | 0.000 | 1.8275 | 68 | 3 | 2 2 6 |
| 24 | 51.251 | 51.251 | 0.000 | 1.7811 | 101 | 5 | 0 4 2 |
| 25 | 52.138 | 52.138 | 0.000 | 1.7529 | 192 | 10 | 2 1 10 |
| 26 | 52.747 | 52.747 | 0.000 | 1.7341 | 43 | 2 | 1 1 12 |
| 27 | 53.221 | 53.221 | 0.000 | 1.7197 | 66 | 3 | 4 0 4 |
| 28 | 53.672 | 53.672 | 0.000 | 1.7063 | 26 | 1 | 1 3 7 |
| 29 | 55.515 | 55.516 | -0.001 | 1.6540 | 37 | 2 | 1 2 11 |
| 30 | 56.119 | 56.119 | 0.000 | 1.6376 | 33 | 2 | 2 3 2 |
| 31 | 57.975 | 57.975 | 0.000 | 1.5895 | 43 | 2 | 3 2 4 |
| 32 | 58.607 | 58.607 | 0.000 | 1.5739 | 156 | 8 | 4 1 0 |
| 33 | 61.518 | 61.519 | -0.001 | 1.5062 | 65 | 3 | 1 3 10 |
| 34 | 62.066 | 62.066 | 0.000 | 1.4942 | 23 | 1 | 3 0 12 |
| 35 | 62.778 | 62.778 | 0.000 | 1.4789 | 22 | 1 | 2 1 13 |
| 36 | 63.937 | 63.938 | -0.001 | 1.4549 | 56 | 3 | 4 1 6 |
| 37 | 65.068 | 65.068 | 0.000 | 1.4323 | 43 | 2 | 2 3 8 |
| 38 | 65.128 | 65.128 | 0.000 | 1.4311 | 46 | 2 | 5 0 2 |
| 39 | 66.421 | 66.422 | -0.001 | 1.4064 | 54 | 3 | 2 2 12 |
| 40 | 66.594 | 66.595 | -0.001 | 1.4031 | 54 | 3 | 1 0 16 |
| 41 | 66.664 | 66.655 | 0.009 | 1.4019 | 46 | 2 | 1 2 14 |
| 42 | 66.834 | 66.834 | 0.000 | 1.3987 | 43 | 2 | 0 5 4 |
| 43 | 70.124 | 70.124 | 0.000 | 1.3409 | 53 | 3 | 3 2 10 |
| 44 | 70.281 | 70.281 | 0.000 | 1.3383 | 20 | 1 | 4 1 9 |
| 45 | 70.804 | 70.805 | -0.001 | 1.3297 | 25 | 1 | 0 2 16 |
| 46 | 71.037 | 71.037 | 0.000 | 1.3259 | 39 | 2 | 2 4 4 |
| 47 | 71.303 | 71.304 | -0.001 | 1.3216 | 22 | 1 | 1 3 13 |
| 48 | 72.394 | 72.394 | 0.000 | 1.3043 | 32 | 2 | 3 3 6 |
| 49 | 73.519 | 73.519 | 0.000 | 1.2871 | 35 | 2 | 1 5 2 |
| 50 | 74.909 | 74.910 | -0.001 | 1.2667 | 23 | 1 | 2 1 16 |
| 51 | 74.966 | 74.966 | 0.000 | 1.2659 | 23 | 1 | 3 1 14 |
| 52 | 77.496 | 77.496 | 0.000 | 1.2307 | 20 | 1 | 2 2 15 |
| 53 | 77.513 | 77.513 | 0.000 | 1.2305 | 20 | 1 | 4 2 8 |
| 54 | 82.261 | 82.261 | 0.000 | 1.1711 | 19 | 1 | 2 4 10 |
| 55 | 82.963 | 82.963 | 0.000 | 1.1629 | 18 | 1 | 2 3 14 |
| 56 | 83.129 | 83.129 | 0.000 | 1.610 | 23 | 1 | 4 3 4 |
| 57 | 86.203 | 86.203 | 0.000 | 1.1273 | 20 | 1 | 5 1 10 |
| 58 | 86.686 | 86.687 | -0.001 | 1.1223 | 24 | 1 | 3 3 12 |
| 59 | 88.355 | 88.355 | 0.000 | 1.1053 | 25 | 1 | 5 2 6 |
| 60 | 89.431 | 89.431 | 0.000 | 1.0948 | 20 | 1 | 6 1 2 |

**Table-6. Mn0.9Zn0.1-MOF XRD Data**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | 2θ Obs. | 2θ Calc. | Δ2θ = Obs. -Calc | d (Å)  Obs. | I(abs) | I(rel) | h k l |
| 1 | 14.511 | 14.511 | 0 .000 | 6.0994 | 1513 | 100 | 0 1 2 |
| 2 | 19.800 | 19.800 | 0 .000 | 4.4802 | 891 | 59 | 1 0 4 |
| 3 | 21.327 | 21.327 | 0 .000 | 4.1629 | 563 | 37 | 1 1 0 |
| 4 | 23.316 | 23.316 | 0.000 | 3.8120 | 45 | 3 | 0 0 6 |
| 5 | 24.342 | 24.341 | 0 .000 | 3.6537 | 658 | 44 | 1 1 3 |
| 6 | 25.892 | 25.892 | 0.000 | 3.4383 | 71 | 5 | 2 0 2 |
| 7 | 29.261 | 29.261 | 0.000 | 3.0497 | 493 | 33 | 0 2 4 |
| 8 | 31.804 | 31.804 | 0.000 | 2.8114 | 540 | 36 | 1 1 6 |
| 9 | 33.076 | 33.076 | 0.000 | 2.7061 | 117 | 8 | 2 1 1 |
| 10 | 33.784 | 33.784 | 0.000 | 2.6510 | 27 | 2 | 1 2 2 |
| 11 | 36.494 | 36.494 | 0 .000 | 2.4601 | 183 | 12 | 2 1 4 |
| 12 | 37.386 | 37.386 | 0.000 | 2.4035 | 150 | 10 | 3 0 0 |
| 13 | 38.417 | 38.417 | 0.000 | 2.3413 | 371 | 25 | 1 2 5 |
| 14 | 40.225 | 40.225 | 0.000 | 2.2401 | 197 | 13 | 2 0 8 |
| 15 | 41.381 | 41.381 | 0 .000 | 2.1802 | 31 | 2 | 1 0 10 |
| 16 | 43.192 | 43.192 | 0.000 | 2.0929 | 66 | 4 | 2 1 7 |
| 17 | 43.441 | 43.441 | 0.000 | 2.0814 | 67 | 4 | 2 2 0 |
| 18 | 44.529 | 44.529 | 0 .000 | 2.0331 | 152 | 10 | 3 0 6 |
| 19 | 45.116 | 45.116 | 0 .000 | 2.0080 | 52 | 3 | 2 2 3 |
| 20 | 45.970 | 45.970 | 0.000 | 1.9727 | 206 | 14 | 1 2 8 |
| 21 | 46.038 | 46.038 | 0.000 | 1.9699 | 212 | 14 | 3 1 2 |
| 22 | 47.012 | 47.012 | -.001 | 1.9313 | 63 | 4 | 0 2 10 |
| 23 | 47.675 | 47.674 | 0.000 | 1.9060 | 18 | 1 | 0 0 12 |
| 24 | 48.167 | 48.167 | 0.000 | 1.8877 | 52 | 3 | 1 3 4 |
| 25 | 49.878 | 49.878 | 0.000 | 1.8269 | 63 | 4 | 2 2 6 |
| 26 | 51.265 | 51.266 | -0.001 | 1.7806 | 48 | 3 | 0 4 2 |
| 27 | 52.166 | 52.166 | 0.000 | 1.7520 | 144 | 10 | 2 1 10 |
| 28 | 52.781 | 52.781 | 0.000 | 1.7330 | 34 | 2 | 1 1 12 |
| 29 | 53.239 | 53.239 | 0.000 | 1.7192 | 53 | 4 | 4 0 4 |
| 30 | 53.694 | 53.694 | 0.000 | 1.7057 | 14 | 1 | 1 3 7 |
| 31 | 55.548 | 55.547 | 0.001 | 1.6531 | 34 | 2 | 1 2 11 |
| 32 | 55.665 | 55.665 | 0.000 | 1.6499 | 22 | 1 | 3 2 1 |
| 33 | 56.077 | 56.077 | 0.000 | 1.6387 | 24 | 2 | 3 1 8 |
| 34 | 56.136 | 56.136 | 0.000 | 1.6371 | 26 | 2 | 2 3 2 |
| 35 | 57.822 | 57.822 | 0.000 | 1.5933 | 26 | 2 | 0 1 14 |
| 36 | 58.624 | 58.624 | 0.000 | 1.5734 | 91 | 6 | 4 1 0 |
| 37 | 59.985 | 59.985 | 0.000 | 1.5409 | 18 | 1 | 4 1 3 |
| 38 | 61.549 | 61.549 | 0.000 | 1.5055 | 51 | 3 | 1 3 10 |
| 39 | 62.102 | 62.101 | 0.001 | 1.4934 | 24 | 2 | 3 0 12 |
| 40 | 62.816 | 62.816 | 0.000 | 1.4781 | 22 | 2 | 2 1 13 |
| 41 | 63.961 | 63.961 | 0.000 | 1.4544 | 37 | 2 | 4 1 6 |
| 42 | 65.095 | 65.095 | 0.000 | 1.4318 | 62 | 4 | 2 3 8 |
| 43 | 66.458 | 66.458 | 0.000 | 1.4057 | 51 | 3 | 2 2 12 |
| 44 | 66.644 | 66.643 | 0.001 | 1.4022 | 44 | 3 | 1 0 16 |
| 45 | 66.697 | 66.697 | 0.000 | 1.4012 | 48 | 3 | 1 2 14 |
| 46 | 66.855 | 66.856 | 0.000 | 1.3983 | 44 | 3 | 0 5 4 |
| 47 | 68.699 | 68.699 | 0.000 | 1.3652 | 18 | 1 | 3 3 3 |
| 48 | 70.156 | 70.156 | 0.000 | 1.3404 | 36 | 2 | 3 2 10 |
| 49 | 70.855 | 70.854 | 0.001 | 1.3289 | 23 | 2 | 0 2 16 |
| 50 | 71.061 | 71.061 | 0.000 | 1.3255 | 32 | 2 | 2 4 4 |
| 51 | 71.344 | 71.344 | 0.000 | 1.3209 | 16 | 1 | 1 3 13 |
| 52 | 72.421 | 72.421 | 0 .000 | 1.3039 | 36 | 2 | 3 3 6 |
| 53 | 73.491 | 73.491 | 0.000 | 1.2876 | 16 | 1 | 3 0 15 |
| 54 | 73.542 | 73.542 | 0.000 | 1.2868 | 28 | 2 | 1 5 2 |
| 55 | 74.960 | 74.960 | 0.000 | 1.2659 | 24 | 2 | 2 1 16 |
| 56 | 75.011 | 75.010 | 0.001 | 1.2652 | 18 | 1 | 3 1 14 |
| 57 | 75.162 | 75.162 | 0.000 | 1.2630 | 22 | 2 | 5 1 4 |
| 58 | 77.545 | 77.544 | 0.001 | 1.2301 | 24 | 2 | 4 2 8 |
| 59 | 79.038 | 79.038 | 0.000 | 1.2105 | 16 | 1 | 0 4 14 |
| 60 | 79.732 | 79.732 | 0 .000 | 1.2017 | 12 | 1 | 6 0 0 |
| 61 | 82.298 | 82.298 | 0.000 | 1.1706 | 16 | 1 | 2 4 10 |
| 62 | 88.388 | 88.389 | -0.001 | 1.1050 | 15 | 1 | 5 2 6 |
| 63 | 89.413 | 89.413 | 0.000 | 1.0950 | 11 | 1 | 4 1 15 |

**Table-7. Mn0.9Ni0.1-MOF XRD Data**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | 2θ Obs. | 2θ Calc. | Δ2θ = Obs. -Calc | d (Å)  Obs. | I(abs) | I(rel) | h k l |
| 1 | 14.539 | 14.539 | 0 .000 | 6.0875 | 1613 | 100 | 0 1 2 |
| 2 | 19.845 | 19.845 | 0.000 | 4.4702 | 385 | 24 | 1 0 4 |
| 3 | 21.362 | 21.362 | 0.000 | 4.1562 | 304 | 19 | 1 1 0 |
| 4 | 23.378 | 23.378 | 0.000 | 3.8022 | 15 | 1 | 0 0 6 |
| 5 | 24.388 | 24.388 | 0.000 | 3.6469 | 362 | 22 | 1 1 3 |
| 6 | 25.937 | 25.937 | 0.000 | 3.4325 | 31 | 2 | 2 0 2 |
| 7 | 29.318 | 29.319 | -0.001 | 3.0439 | 554 | 34 | 0 2 4 |
| 8 | 31.875 | 31.875 | 0.000 | 2.8053 | 257 | 16 | 1 1 6 |
| 9 | 33.133 | 33.133 | 0.000 | 2.7016 | 48 | 3 | 2 1 1 |
| 10 | 33.783 | 33.783 | 0.000 | 2.6511 | 17 | 1 | 0 1 8 |
| 11 | 36.563 | 36.563 | 0.000 | 2.4556 | 88 | 6 | 2 1 4 |
| 12 | 37.450 | 37.450 | 0.000 | 2.3995 | 68 | 4 | 3 0 0 |
| 13 | 38.493 | 38.493 | 0.000 | 2.3369 | 159 | 10 | 1 2 5 |
| 14 | 40.319 | 40.319 | 0.000 | 2.2351 | 70 | 4 | 2 0 8 |
| 15 | 41.491 | 41.491 | 0.000 | 2.1747 | 17 | 1 | 1 0 10 |
| 16 | 43.285 | 43.285 | 0.000 | 2.0886 | 33 | 2 | 2 1 7 |
| 17 | 43.516 | 43.516 | 0.000 | 2.0780 | 42 | 3 | 2 2 0 |
| 18 | 44.619 | 44.619 | 0.000 | 2.0292 | 116 | 7 | 3 0 6 |
| 19 | 45.198 | 45.198 | 0.000 | 2.0045 | 30 | 2 | 2 2 3 |
| 20 | 46.073 | 46.073 | 0.000 | 1.9685 | 113 | 7 | 1 2 8 |
| 21 | 46.119 | 46.119 | 0.000 | 1.9666 | 114 | 7 | 3 1 2 |
| 22 | 47.129 | 47.129 | 0.000 | 1.9268 | 26 | 2 | 0 2 10 |
| 23 | 48.257 | 48.257 | 0.000 | 1.8844 | 37 | 2 | 1 3 4 |
| 24 | 49.978 | 49.978 | 0.000 | 1.8234 | 25 | 2 | 2 2 6 |
| 25 | 51.358 | 51.358 | 0.000 | 1.7776 | 34 | 2 | 0 4 2 |
| 26 | 52.291 | 52.291 | 0.000 | 1.7481 | 50 | 3 | 2 1 10 |
| 27 | 53.338 | 53.338 | 0.000 | 1.7162 | 25 | 2 | 4 0 4 |
| 28 | 55.683 | 55.684 | -0.001 | 1.6494 | 14 | 1 | 1 2 11 |
| 29 | 56.197 | 56.197 | 0.000 | 1.6355 | 15 | 1 | 3 1 8 |
| 30 | 57.986 | 57.985 | 0.001 | 1.5892 | 15 | 1 | 0 1 14 |
| 31 | 58.104 | 58.104 | 0.000 | 1.5863 | 15 | 1 | 3 2 4 |
| 32 | 58.730 | 58.730 | 0.000 | 1.5708 | 54 | 3 | 4 1 0 |
| 33 | 61.690 | 61.690 | 0.000 | 1.5024 | 22 | 1 | 1 3 10 |
| 34 | 62.257 | 62.257 | 0.000 | 1.4901 | 21 | 1 | 3 0 12 |
| 35 | 64.089 | 64.089 | 0.000 | 1.4518 | 24 | 2 | 4 1 6 |
| 36 | 65.233 | 65.233 | 0.000 | 1.4291 | 24 | 2 | 2 3 8 |
| 37 | 65.270 | 65.270 | 0.000 | 1.4284 | 25 | 2 | 5 0 2 |
| 38 | 66.839 | 66.839 | 0.000 | 1.3986 | 29 | 2 | 1 0 16 |
| 39 | 70.316 | 70.316 | 0.000 | 1.3377 | 13 | 1 | 3 2 10 |
| 40 | 70.467 | 70.467 | 0.000 | 1.3352 | 13 | 1 | 4 1 9 |
| 41 | 71.058 | 71.058 | 0.000 | 1.3256 | 14 | 1 | 0 2 16 |
| 42 | 71.200 | 71.200 | 0.000 | 1.3233 | 13 | 1 | 2 4 4 |
| 43 | 72.438 | 72.438 | 0.000 | 1.3037 | 16 | 1 | 4 2 5 |
| 44 | 73.684 | 73.684 | 0.000 | 1.2847 | 22 | 1 | 1 5 2 |
| 45 | 75.207 | 75.207 | 0.000 | 1.2624 | 13 | 1 | 3 1 14 |
| 46 | 82.489 | 82.489 | 0.000 | 1.1684 | 10 | 1 | 2 4 10 |
| 47 | 83.194 | 83.194 | 0.000 | 1.1603 | 12 | 1 | 1 3 16 |
| 48 | 83.867 | 83.867 | 0.000 | 1.1527 | 11 | 1 | 5 2 0 |
| 49 | 86.445 | 86.445 | 0.000 | 1.1248 | 11 | 1 | 5 1 10 |

**Table-8. Mn0.9Co0.1-MOF XRD Data**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | 2θ Obs. | 2θ Calc. | Δ2θ =  Obs. -Calc | d (Å)  Obs. | I(abs) | I(rel) | h k l |
| 1 | 14.543 | 14.543 | 0.000 | 6.0859 | 2395 | 100 | 0 1 2 |
| 2 | 19.861 | 19.861 | 0.000 | 4.4668 | 1657 | 69 | 1 0 4 |
| 3 | 21.359 | 21.359 | 0.000 | 4.1568 | 914 | 38 | 1 1 0 |
| 4 | 23.411 | 23.410 | 0.001 | 3.7968 | 122 | 5 | 0 0 6 |
| 5 | 24.393 | 24.393 | 0.000 | 3.6461 | 1173 | 49 | 1 1 3 |
| 6 | 25.937 | 25.937 | 0.000 | 3.4324 | 128 | 5 | 2 0 2 |
| 7 | 29.327 | 29.327 | 0.000 | 3.0430 | 1097 | 46 | 0 2 4 |
| 8 | 31.897 | 31.897 | 0.000 | 2.8034 | 721 | 30 | 1 1 6 |
| 9 | 33.128 | 33.128 | 0.000 | 2.7020 | 215 | 9 | 2 1 1 |
| 10 | 33.823 | 33.823 | 0.000 | 2.6480 | 64 | 3 | 0 1 8 |
| 11 | 36.568 | 36.568 | 0.000 | 2.4553 | 247 | 10 | 2 1 4 |
| 12 | 37.444 | 37.444 | 0.000 | 2.3999 | 296 | 12 | 3 0 0 |
| 13 | 38.503 | 38.503 | 0.000 | 2.3363 | 425 | 18 | 1 2 5 |
| 14 | 40.352 | 40.352 | 0.000 | 2.2334 | 540 | 23 | 2 0 8 |
| 15 | 41.544 | 41.544 | 0.000 | 2.1720 | 142 | 6 | 1 0 10 |
| 16 | 43.307 | 43.306 | 0.001 | 2.0876 | 98 | 4 | 2 1 7 |
| 17 | 43.509 | 43.509 | 0.000 | 2.0783 | 104 | 4 | 2 2 0 |
| 18 | 44.632 | 44.632 | 0.000 | 2.0286 | 405 | 17 | 3 0 6 |
| 19 | 45.196 | 45.196 | 0.000 | 2.0046 | 107 | 5 | 2 2 3 |
| 20 | 46.101 | 46.100 | 0.001 | 1.9673 | 321 | 13 | 1 2 8 |
| 21 | 46.114 | 46.114 | 0.000 | 1.9668 | 322 | 13 | 3 1 2 |
| 22 | 47.175 | 47.175 | 0.000 | 1.9250 | 99 | 4 | 0 2 10 |
| 23 | 47.877 | 47.877 | 0.000 | 1.8984 | 41 | 2 | 0 0 12 |
| 24 | 48.257 | 48.257 | 0.000 | 1.8844 | 228 | 10 | 1 3 4 |
| 25 | 49.988 | 49.988 | 0.000 | 1.8231 | 125 | 5 | 2 2 6 |
| 26 | 51.351 | 51.351 | 0.000 | 1.7779 | 108 | 5 | 0 4 2 |
| 27 | 52.333 | 52.333 | 0.000 | 1.7468 | 282 | 12 | 2 1 10 |
| 28 | 52.984 | 52.983 | 0.001 | 1.7269 | 116 | 5 | 1 1 12 |
| 29 | 53.337 | 53.337 | 0.000 | 1.7162 | 85 | 4 | 4 0 4 |
| 30 | 55.733 | 55.732 | 0.001 | 1.6480 | 82 | 3 | 1 2 11 |
| 31 | 56.218 | 56.218 | .000 | 1.6349 | 66 | 3 | 3 1 8 |
| 32 | 58.067 | 58.067 | 0.000 | 1.5872 | 159 | 7 | 0 1 14 |
| 33 | 58.720 | 58.720 | 0.000 | 1.5711 | 175 | 7 | 4 1 0 |
| 34 | 60.090 | 60.090 | 0.000 | 1.5385 | 53 | 2 | 4 1 3 |
| 35 | 61.725 | 61.725 | 0.000 | 1.5016 | 86 | 4 | 1 3 10 |
| 36 | 62.311 | 62.311 | 0.000 | 1.4889 | 47 | 2 | 3 0 12 |
| 37 | 62.597 | 62.597 | 0.000 | 1.4828 | 37 | 2 | 2 0 14 |
| 38 | 63.044 | 63.044 | 0.000 | 1.4733 | 73 | 3 | 2 1 13 |
| 39 | 64.094 | 64.094 | 0.000 | 1.4517 | 134 | 6 | 4 1 6 |
| 40 | 65.250 | 65.250 | 0.000 | 1.4288 | 94 | 4 | 2 3 8 |
| 41 | 65.366 | 65.365 | 0.001 | 1.4265 | 92 | 4 | 1 1 15 |
| 42 | 66.672 | 66.672 | 0.000 | 1.4017 | 69 | 3 | 2 2 12 |
| 43 | 66.948 | 66.948 | 0.000 | 1.3966 | 116 | 5 | 1 2 14 |
| 44 | 68.822 | 68.822 | 0.000 | 1.3631 | 46 | 2 | 3 3 3 |
| 45 | 69.524 | 69.524 | 0.000 | 1.3510 | 59 | 3 | 4 2 2 |
| 46 | 70.346 | 70.346 | 0.000 | 1.3372 | 72 | 3 | 3 2 10 |
| 47 | 71.194 | 71.194 | 0.000 | 1.3234 | 137 | 6 | 2 4 4 |
| 48 | 72.571 | 72.571 | 0.000 | 1.3016 | 66 | 3 | 3 3 6 |
| 49 | 73.663 | 73.662 | 0.001 | 1.2850 | 92 | 4 | 5 0 8 |
| 50 | 74.981 | 74.981 | 0.000 | 1.2656 | 33 | 1 | 0 0 18 |
| 51 | 75.264 | 75.264 | 0.000 | 1.2616 | 46 | 2 | 2 1 16 |
| 52 | 77.832 | 77.832 | 0.000 | 1.2262 | 34 | 1 | 2 2 15 |
| 53 | 78.660 | 78.660 | 0.000 | 1.2154 | 41 | 2 | 3 3 9 |
| 54 | 79.021 | 79.021 | 0.000 | 1.2107 | 31 | 1 | 1 1 18 |
| 55 | 79.051 | 79.050 | 0.001 | 1.2104 | 32 | 1 | 4 1 12 |
| 56 | 79.309 | 79.309 | 0.000 | 1.2071 | 30 | 1 | 0 4 14 |
| 57 | 79.694 | 79.694 | 0.000 | 1.2022 | 36 | 2 | 1 2 17 |

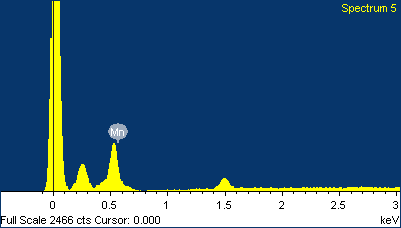
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Mn_Zn_MOF_Exp_theo_XRD.tif

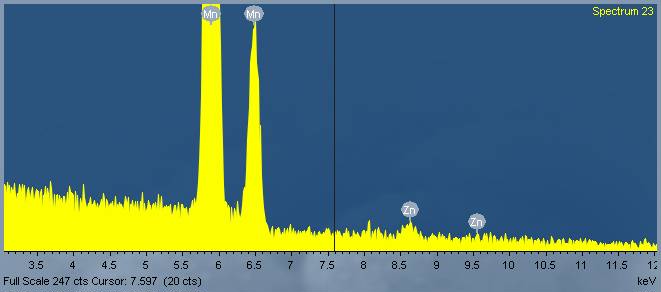
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Mn_Co_MOF_Exp_theo_XRD.tif

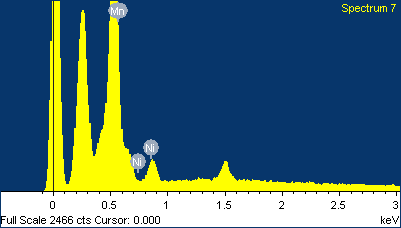
EDAX Spectra of all the MOFs



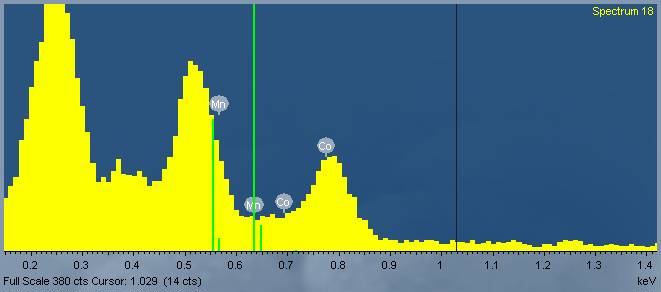
Mn-MOF without any substitution



EDAX spectrum of - Mn0.9Zn0.1- MOF



EDAX spectrum of - Mn0.9Ni0.1- MOF



EDAX spectrum of - Mn0.9Co0.1- MOF