Supplementary material

TABLE I

Parameters’ values used for training dataset creation

|  |  |
| --- | --- |
| Parameter | Value |
| *dр*,μm | 150, 180, 210, 240 |
| *N*B,cm-3 | 1015 , 1.778×1015, 3.162×1015, 5.623×1015, 1016 , 1.778×1016, 3.162×1016, 5.623×1016, 1017 |
| *N*Fe,cm-3 | 1010, 1.468×1010, 2.154×1010, 3.162×1010, 4.642×1010, 6.813×1010, 1011, 1.468×1011, 2.154×1011, 3.162×1011, 4.642×1011, 6.813×1011, 1012, 1.468×1012, 2.154×1012, 3.162×1012, 4.642×1012, 6.813×1012, 1013 |
| *T*, K | 290, 295,300, 305, 310, 315, 320, 325, 330, 335, 340 |

TABLE II

Parameters’ values used for test dataset creation

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *N*B,cm-3 | | *N*Fe,cm-3 | | *dр*,μm | | *T*, K | | # of IVCs | |
| B-varied dataset | | | | | | | | | |
| 1.4×1015 | | 1010, 1.468×1010, 2.154×1010, 3.162×1010, 4.642×1010, 6.813×1010, 1011, 1.468×1011, 2.154×1011, 3.162×1011, 4.642×1011, 6.813×1011, 1012, 1.468×1012, 2.154×1012, 3.162×1012, 4.642×1012, 6.813×1012, 1013 | | 150, 180 | | 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340 | | 1672 | |
| 4.5×1015 , 8×1016 | | 1010, 2.154×1010, 3.162×1010, 1.468×1011, 2.154×1011, 4.642×1011, 1012, 2.154×1012, 3.162×1012, 4.642×1012, 6.813×1012, 1013 | | 210 | | 290, 305, 320, 340 | | 384 | |
| Fe-varied dataset | | | | | | | | | |
| 1.778×1015, 5.623×1015, 1016 , 3.162×1016, 1017 | | 1.3×1010, 2.471×1010, 4.696×1010, 8.927×1010, 1.697×1011, 3.225×1011, 6.13×1011, 1.165×1012, 2.214×1012, 4.209×1012, 8×1012 | | 180 | | 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340 | | 2420 | |
| 3.162×1015, 1016 , 1017 | | 1.2×1011, 2.234×1011, 4.16×1011, 7.746×1011, 1.442×1012, 2.685×1012, 5×1012 | | 210, 240 | | 290, 300, 310, 320, 330, 340 | | 1004 | |
| d-varied dataset | | | | | | | | | |
| 1015 , 5.623×1015, 1.778×1016, 5.623×1016 | | 1010, 1.468×1010, 2.154×1010, 3.162×1010, 4.642×1010, 6.813×1010, 1011, 1.468×1011, 2.154×1011, 3.162×1011, 4.642×1011, 6.813×1011, 1012, 1.468×1012, 2.154×1012, 3.162×1012, 4.642×1012, 6.813×1012, 1013 | | 190 | | 290, 300, 310, 320, 330, 340 | | 1824 | |
| 1015 , 1.778×1015, 3.162×1015, 5.623×1015, 1016 , 1.778×1016, 3.162×1016, 5.623×1016, 1017 | | 1010, 3.162×1010, 1011, 3.162×1011, 1012, 3.162×1012, 1013 | | 205 | | 295, 305, 315, 325, 335 | | 1260 | |
| 1.778×1015, 1016 | | 1010, 1.468×1010, 2.154×1010, 3.162×1010, 4.642×1010, 6.813×1010, 1011, 1.468×1011, 2.154×1011, 3.162×1011, 4.642×1011, 6.813×1011, 1012, 1.468×1012, 2.154×1012, 3.162×1012, 4.642×1012, 6.813×1012, 1013 | | 230 | | 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340 | | 1672 | |
| T-varied dataset | | | | | | | | | |
| 1015 , 1.778×1015, 3.162×1015, 5.623×1015, 1016 , 1.778×1016, 3.162×1016, 5.623×1016, 1017 | | 1.468×1010, 4.642×1010, 6.813×1010, 1.468×1011, 4.642×1011, 6.813×1011, 2.154×1012, 4.642×1012 | | 210 | | 314 | | 288 | |
| 1015 , 5.623×1015, 1.778×1016, 3.162×1016 | | 1010, 1.468×1010, 2.154×1010, 3.162×1010, 4.642×1010, 6.813×1010, 1011, 1.468×1011, 2.154×1011, 3.162×1011, 4.642×1011, 6.813×1011, 1012, 1.468×1012, 2.154×1012, 3.162×1012, 4.642×1012, 6.813×1012, 1013 | | 150, 180, 210, 240 | | 303 | | 1216 | |
| 1.778×1015, 1.778×1016, 1017 | | 150, 180 | | 393 | | 456 | |
| 1015 , 1.778×1015, 3.162×1015, 5.623×1015, 1016 , 1.778×1016, 3.162×1016, 5.623×1016, 1017 | | 180, 240 | | 336 | | 1328 | |
| 1015 , 1.778×1015, 3.162×1015, 5.623×1015, 1016 , 1.778×1016, 3.162×1016, 5.623×1016, 1017 | | 1.468×1010, 4.642×1010, 6.813×1010, 1.468×1011, 4.642×1011, 6.813×1011, 2.154×1012, 4.642×1012 | | 210 | | 314 | | 288 | |
| All-varied dataset | | | | | | | | | |
| 1.3×1015 , 2×1016 | | 5×1012, 6.082×1012, 7.399×1012, 9×1012 | | 200 | | 293, 313, 333 | | 96 | |
| 7×1015 , 4.5×1016 | | 5×1010, 5.861×1010, 6.869×1010, 8.051×1010, 9.437×1010, 1.106×1011, 1.296×1011, 1.52×1011, 1.781×1011, 2.088×1011, 2.447×1011, 2.868×1011, 3.362×1011, 3.94×1011, 4.618×1011, 5.413×1011, 6.345×1011, 7.437×1011, 8.717×1011, 1.022×1012, 1.198×1012, 1.404×1012, 1.645×1012, 1.928×1012, 2.26×1012, 2.649×1012, 3.105×1012, 3.639×1012, 4.266×1012, 5×1012 | | 170, 200 | | 297, 309, 321, 333 | | 1920 | |
| 2.5×1015 , 8×1016 | | 1.1×1010, 1.302×1010, 1.54×1010, 1.822×1010, 2.156×1010, 2.551×1010, 3.018×1010, 3.571×1010, 4.226×1010, 5×1010, 1.1×1011, 1.302×1011, 1.54×1011, 1.822×1011, 2.156×1011, 2.551×1011, 3.018×1011, 3.571×1011, 4.226×1011, 5×1011,1.1×1012, 1.302×1012, 1.54×1012, 1.822×1012, 2.156×1012, 2.551×1012, 3.018×1012, 3.571×1012, 4.226×1012, 5×1012 | | 220 | | 292, 302, 312 | | 720 | |