**Modeling the Impact of Iron Defect Variability on Silicon Solar Cell Performance Across Different Scenarios**

Oleg Olikh, Oleksii Zavhorodnii

*Taras Shevchenko National University of Kyiv, 64/13, Volodymyrska Street, Kyiv, 01601, Ukraine*

olegolikh@knu.ua

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
| Fig.S1. Dependencies of relative changes of short-circuit current on iron concentration and doping level for SC with different base depth. *T*, K: 290 (left panels), 340 (right panels). | |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
| Fig.S2. Dependencies of relative changes of short-circuit current on iron concentration and doping level at different temperatures. *dp*, μm: 180 (left panels), 380 (right panels). | |

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
| Fig.S3. Dependencies of relative changes of short-circuit current on iron concentration and temperature for SC with different base depth. *N*B, cm-3: 1015 (left panels), 1016 (middle panels), 1017 (right panels). | | |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
| Fig.S4. Dependencies of relative changes of short-circuit current on iron concentration and temperature for SC with different base doping level. *dp*, μm: 180 (left panels), 380 (right panels). | |

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
| Fig.S5. Dependencies of relative changes of short-circuit current on iron concentration and base depth for different temperatures. *N*B, cm-3: 1015 (left panels), 1016 (middle panels), 1017 (right panels). | | |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
| Fig.S6. Dependencies of relative changes of short-circuit current on iron concentration and base depth for SC with different base doping level. *T*, K: 290 (left panels), 340 (right panels). | |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
| Fig.S7. Dependencies of relative changes of open-circuit voltage on iron concentration and doping level for SC with different base depth. *T*, K: 290 (left panels), 340 (right panels). | |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
| Fig.S8. Dependencies of relative changes of open-circuit voltage on iron concentration and doping level at different temperatures. *dp*, μm: 180 (left panels), 380 (right panels). | |

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
| Fig.S9. Dependencies of relative changes of open-circuit voltage on iron concentration and temperature for SC with different base depth. *N*B, cm-3: 1015 (left panels), 1016 (middle panels), 1017 (right panels). | | |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
| Fig.S10. Dependencies of relative changes of open-circuit voltage on iron concentration and temperature for SC with different base doping level. *dp*, μm: 180 (left panels), 380 (right panels). | |

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
| Fig.S11. Dependencies of relative changes of open-circuit voltage on iron concentration and base depth for different temperatures. *N*B, cm-3: 1015 (left panels), 1016 (middle panels), 1017 (right panels). | | |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
| Fig.S12. Dependencies of relative changes of open-circuit voltage on iron concentration and base depth for SC with different base doping level. *T*, K: 290 (left panels), 340 (right panels). | |