**NISP Code Suit**

**Table-1: Simple Electronegative code suit**

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| **Sl. No** | **Code Name** | **Working** |
| 1 | drv\_sub.m | Solves for with respect to |
| 2 | sub.m | Subroutine of drv\_sub.m |
| 3 | single\_multiple.m | Subroutine file of drv\_single\_multiple.m & segregates the for which is single valued and multiple valued. |
| 4 | find\_xdata.m | Subroutine file that finds the indices of the ‘xdata’ which are equal to a desired . |
| 5 | find\_multivalued\_range.m | Finds the range of for which is multivalued. |
| 6 | drv\_pot.m | Driver file to solve the Poisson’s equation for simple electronegative case. |
| 7 | sub\_pot.m | Subroutine file for solving the Poisson’ sequation. |
| 8 | drv\_F.m | Driver file to solve the differential equation of the square of the electric field. |
| 9 | sub\_F.m | Subroutine file corresponding to drv\_F.m. |
| 10 | F\_plot.m | File to plot the function F with . |
| 11 | plot\_pot.m | Plots the potential profile based on various mat file. |

**Table-2:** **Description of the nisp code-suit**

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| **Sl. No** | **Code Name** | **Working** |
|  | drv\_sub.m | Solves for with respect to |
|  | sub.m | Subroutine of drv\_sub.m |
|  | Jp\_alpha.m | Calculates and Saves the positive ion current density for various values of |
|  | Jp\_alpha\_plot.m | Plots the current density for various values of . Must run after executing Jp\_alpha.m |
|  | Jp\_delta.m | Calculates and Saves the positive ion current density for various values of |
|  | Jp\_delta\_plot.m | Plots the current density for various values of . Must run after executing Jp\_delta.m |
|  | Jp\_gamma.m | Calculates and Saves the positive ion current density for various values of . |
|  | Jp\_gamma\_plot.m | Plots the current density for various values of . Must run after executing Jp\_gamma.m |
|  | F\_alpha.m | Plots the variation of F for various values of |
|  | drv\_single\_multiple.m | Driver file to find the first and the last values of the electronegativity () for which the electric potential () has multiple values. The program also plots the variation . The code depends on two subroutine files, single\_multiple.m and find\_xdata.m. |
|  | single\_multiple.m | Subroutine file of drv\_single\_multiple.m & segregates the for which is single valued and multiple valued. |
|  | find\_xdata.m | Subroutine file that finds the indices of the ‘xdata’ which are equal to a desired . |