

Supporting Information

Iron-Doped ZnO Nanoparticles as Multifunctional Nanoplatforms for Theranostics

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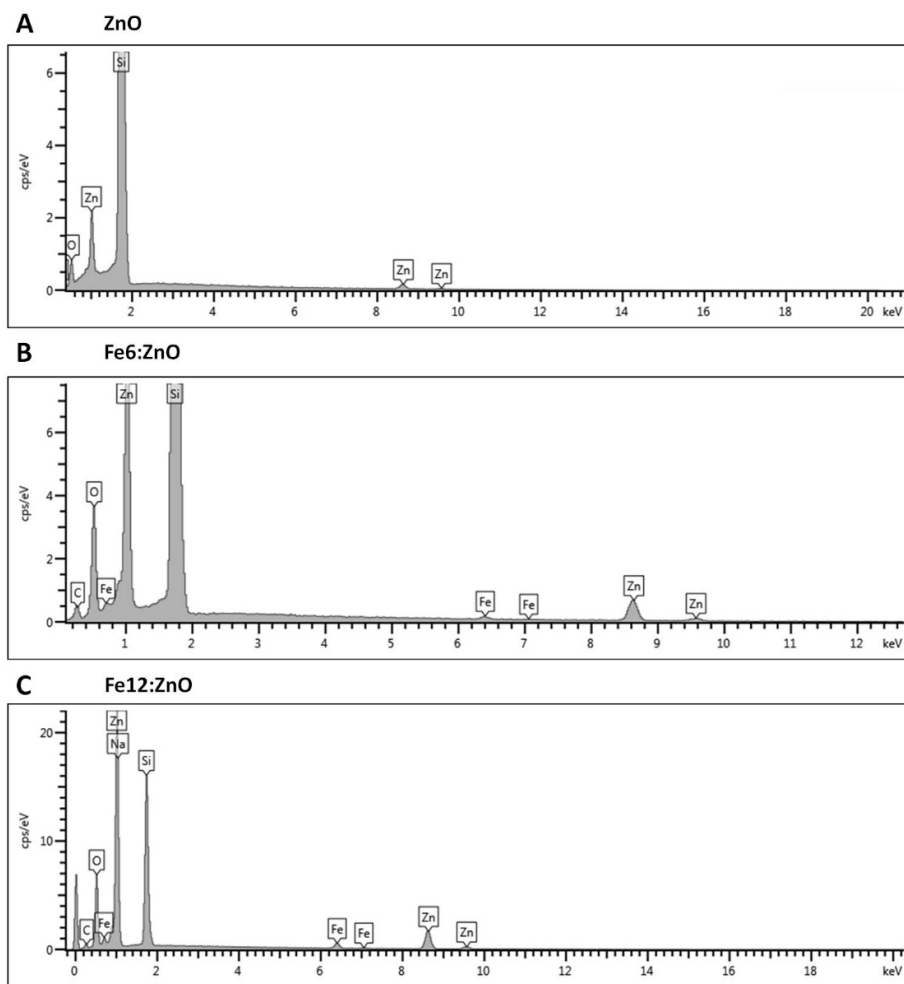


Figure S1. Electron dispersive energy spectroscopy spectra of 0 at.% (A), 6 at.% (B) and 12 at.% (C) iron-doped nanoparticles (Fe:ZnO).

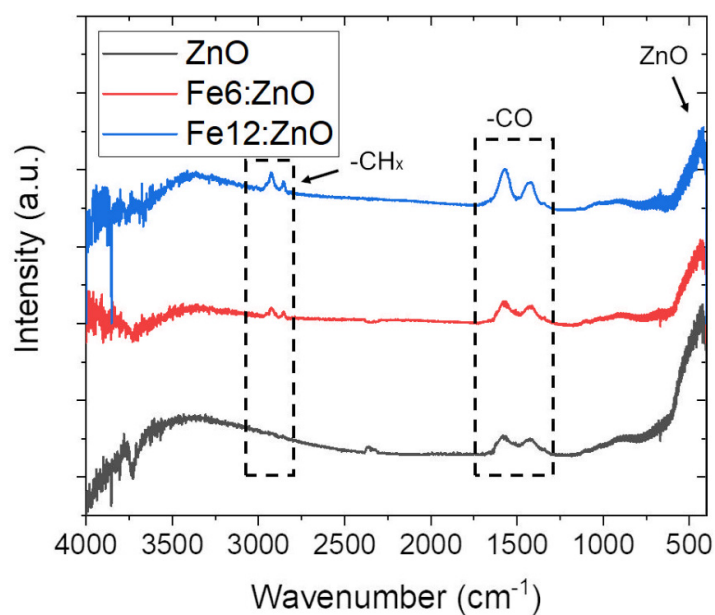


Figure S2. Fourier transform infrared spectroscopy spectra of ZnO and Fe:ZnO nanoparticles prior to amino-propyl functionalization.

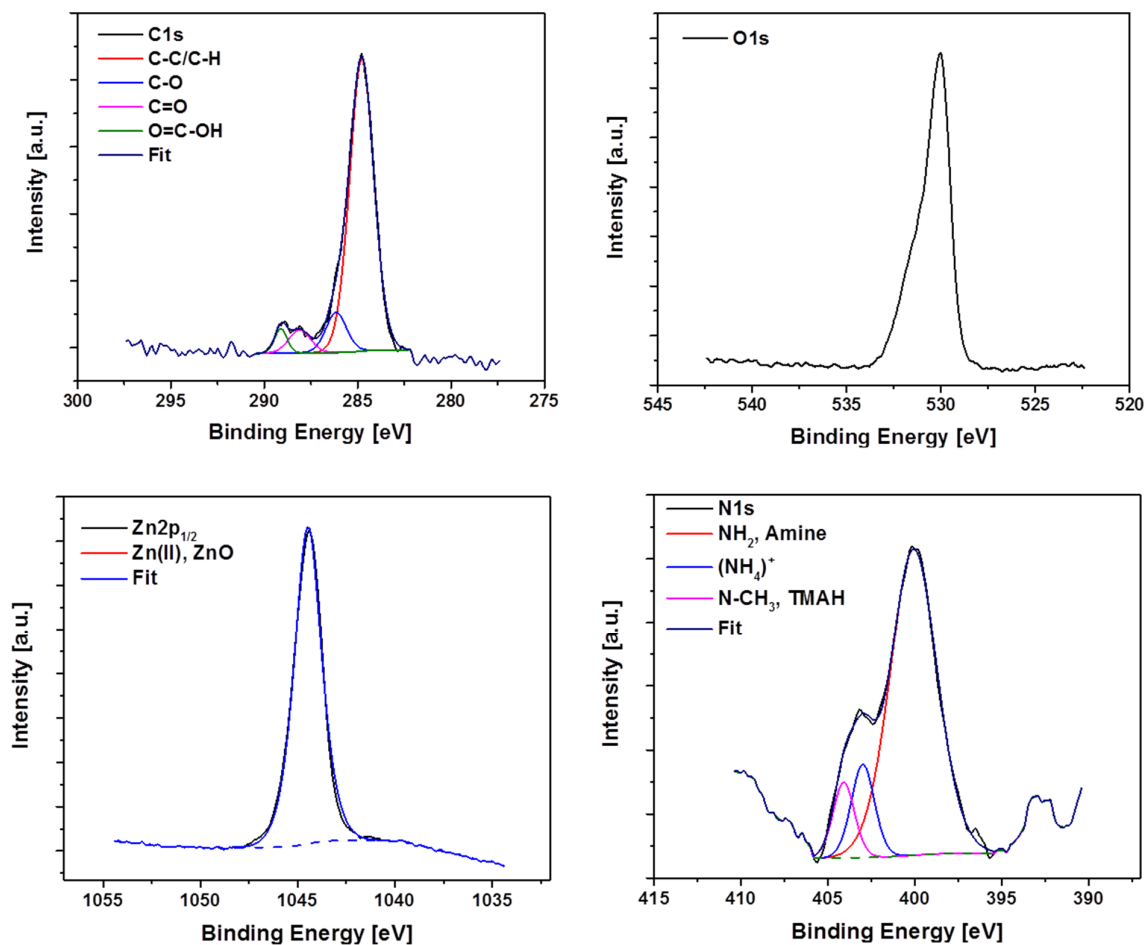


Figure S3. High-Resolution XPS spectra for undoped ZnO NPs.

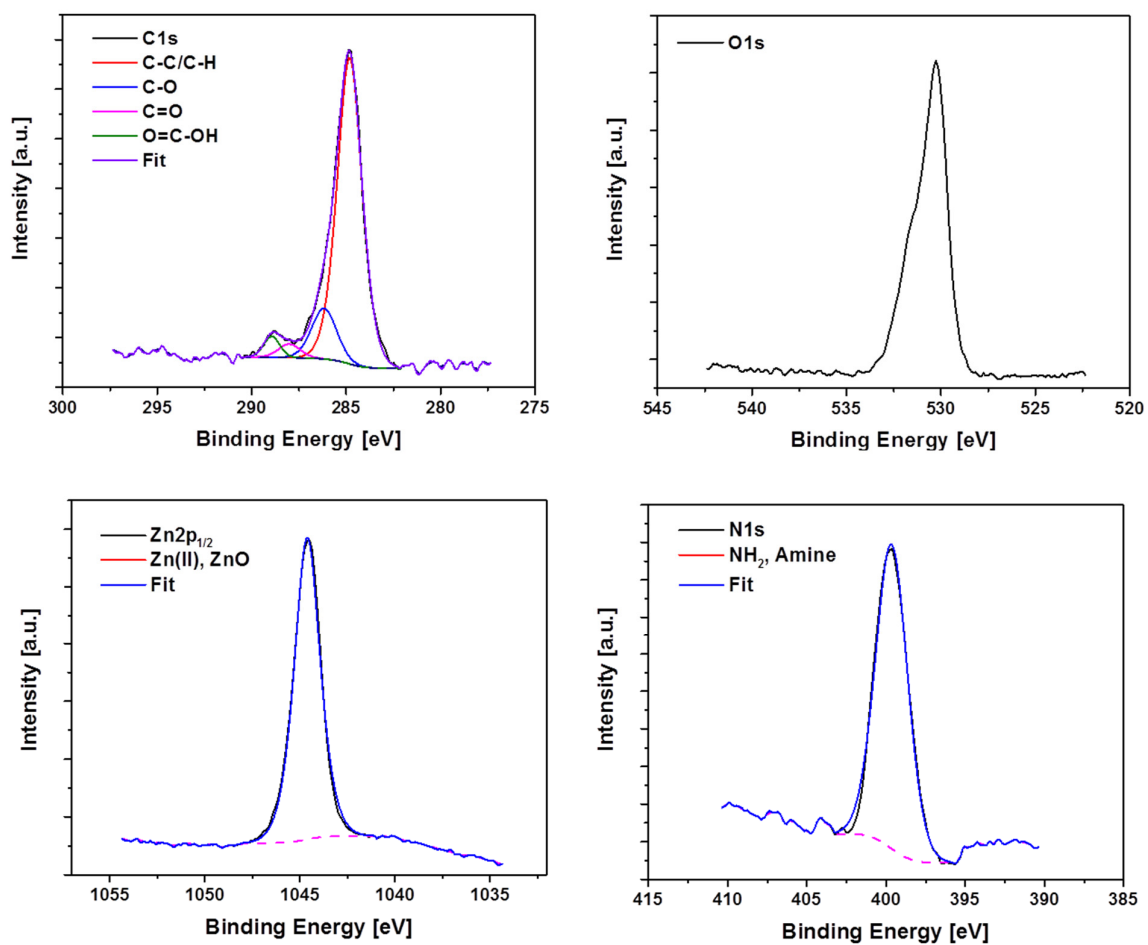


Figure S4. High-Resolution XPS spectra for Fe6:ZnO NPs.

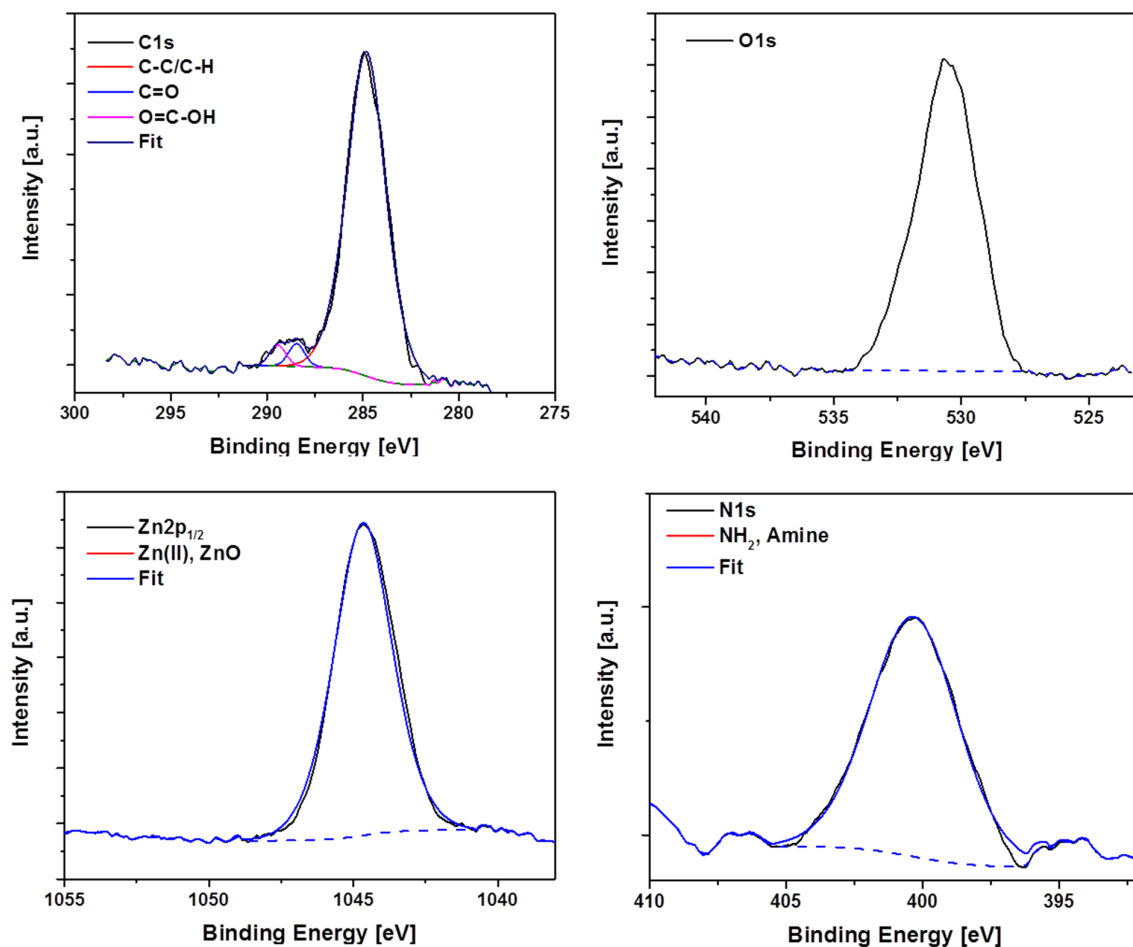


Figure S5. High-Resolution XPS spectra for Fe12:ZnO NPs.

Table S1. FeO and Fe₂O₃ peak components (binding energy and % area) obtained by deconvolution of HR Fe2p_{3/2} XPS spectrum.

| Sample | Fe (II), FeO | | Fe (III), Fe ₂ O ₃ | |
|----------|---------------------|-------------|--|-------------|
| | Binding Energy [eV] | Area [%] | Binding Energy, [eV] | Area [%] |
| Fe6:ZnO | 708.5 | 7.1 | 709.8 | 10.6 |
| | 709.6 | 37.1 | 710.7 | 27.4 |
| | | | 711.6 | 14.7 |
| | | | 712.6 | 3.1 |
| | | 44.2 | | 55.8 |
| Fe12:ZnO | 708.4 | 19.2 | 709.9 | 0.9 |
| | 709.6 | 43.3 | 710.7 | 22.9 |
| | | | 711.6 | 11.6 |
| | | | 712.7 | 2.1 |
| | | 62.5 | | 37.5 |

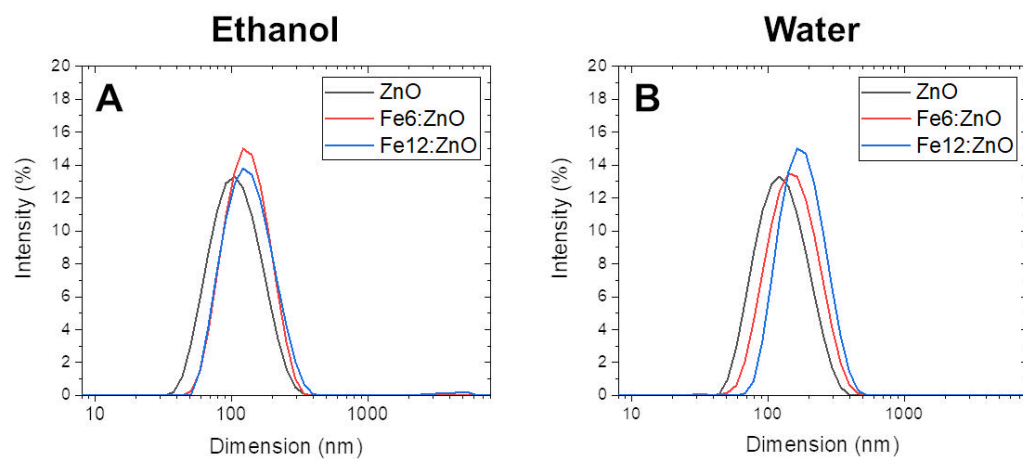


Figure S6. Dynamic light scattering results for the NPs. The graphs shows the intensity of the signal expressed in percentage of ZnO and Fe:ZnO NPs in ethanol (A) and water (B).

Statistical analysis for ZnO and Fe-ZnO cytotoxicity on B lymphocytes (IST-EBV) and Daudi cell lines. Bonferroni t-test (Three Ways ANOVA)

| Comparison between factor: Nanoparticle | | | | | | |
|---|----------|------------|---------|----------|---------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| ZnO | Fe6:ZnO | -4,38333 | 3,82172 | -1,14695 | 0,76529 | 0 |
| ZnO | Fe12:ZnO | -7,95006 | 3,87444 | -2,05193 | 0,13115 | 0 |
| Fe6:ZnO | Fe12:ZnO | -3,56673 | 3,87444 | -0,92058 | 1 | 0 |

| Comparison between parameter: Dose (µg/mL) | | | | | | |
|--|----|------------|---------|----------|----------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| 0 | 10 | 42,77517 | 4,62736 | 9,24397 | 5,77E-13 | 1 |
| 0 | 20 | 67,13061 | 4,62736 | 14,50733 | 2,47E-22 | 1 |
| 0 | 30 | 80,69233 | 4,62736 | 17,4381 | 6,35E-27 | 1 |
| 0 | 40 | 92,11156 | 5,30794 | 17,35353 | 8,48E-27 | 1 |
| 10 | 20 | 24,35544 | 4,74757 | 5,13009 | 2,25E-05 | 1 |
| 10 | 30 | 37,91716 | 4,74757 | 7,98665 | 1,37E-10 | 1 |
| 10 | 40 | 49,33639 | 5,41306 | 9,11432 | 1,01E-12 | 1 |
| 20 | 30 | 13,56172 | 4,74757 | 2,85656 | 5,56E-02 | 0 |
| 20 | 40 | 24,98095 | 5,41306 | 4,61494 | 1,62E-04 | 1 |
| 30 | 40 | 11,41922 | 5,41306 | 2,10957 | 0,38278 | 0 |

| Comparison between parameter: Cell line | | | | | | |
|---|-------|------------|---------|---------|----------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| IST-EBV | Daudi | 33.46824 | 3.14918 | 10.6276 | 1.51E-16 | 1 |

| All pairwise multiple comparisons | | | | | | | | | | |
|-----------------------------------|--------------|-----------|----------|--------------|-----------|------------|---------|-----------|----------|-----|
| NP | Dose (µg/mL) | Cell line | NP | Dose (µg/mL) | Cell line | Mean Diff. | SEM | t Value | Prob | Sig |
| ZnO | 0 | -- | ZnO | 10 | -- | 42,47643 | 7,80105 | 5,44496 | 6,78E-05 | 1 |
| ZnO | 0 | -- | ZnO | 20 | -- | 73,31089 | 7,80105 | 9,39756 | 3,11E-12 | 1 |
| ZnO | 0 | -- | ZnO | 30 | -- | 89,09258 | 7,80105 | 11,42059 | 5,66E-16 | 1 |
| ZnO | 0 | -- | ZnO | 40 | -- | 98,38542 | 9,5543 | 10,2975 | 6,47E-14 | 1 |
| ZnO | 0 | -- | Fe6:ZnO | 0 | -- | -2,84E-14 | 7,80105 | -3,64E-15 | 1 | 0 |
| ZnO | 0 | -- | Fe6:ZnO | 10 | -- | 46,70689 | 7,80105 | 5,98725 | 7,44E-06 | 1 |
| ZnO | 0 | -- | Fe6:ZnO | 20 | -- | 61,18208 | 7,80105 | 7,8428 | 2,70E-09 | 1 |
| ZnO | 0 | -- | Fe6:ZnO | 30 | -- | 78,83601 | 7,80105 | 10,10582 | 1,47E-13 | 1 |
| ZnO | 0 | -- | Fe6:ZnO | 40 | -- | 94,6237 | 9,5543 | 9,90378 | 3,50E-13 | 1 |
| ZnO | 0 | -- | Fe12:ZnO | 0 | -- | -1,56E-13 | 7,80105 | -2,00E-14 | 1 | 0 |
| ZnO | 0 | -- | Fe12:ZnO | 10 | -- | 39,1422 | 8,4261 | 4,64535 | 0,00152 | 1 |
| ZnO | 0 | -- | Fe12:ZnO | 20 | -- | 66,89887 | 8,4261 | 7,93948 | 1,77E-09 | 1 |
| ZnO | 0 | -- | Fe12:ZnO | 30 | -- | 74,14841 | 8,4261 | 8,79985 | 4,17E-11 | 1 |
| ZnO | 0 | -- | Fe12:ZnO | 40 | -- | 83,32555 | 8,4261 | 9,88898 | 3,73E-13 | 1 |
| ZnO | 10 | -- | ZnO | 20 | -- | 30,83446 | 7,80105 | 3,9526 | 0,01839 | 1 |
| ZnO | 10 | -- | ZnO | 30 | -- | 46,61616 | 7,80105 | 5,97562 | 7,81E-06 | 1 |

| | | | | | | | | | | |
|---------|----|----|----------|----|----|-----------|----------|----------|----------|---|
| ZnO | 10 | -- | ZnO | 40 | -- | 55,909 | 9,5543 | 5,85171 | 1,30E-05 | 1 |
| ZnO | 10 | -- | Fe6:ZnO | 0 | -- | -42,47643 | 7,80105 | -5,44496 | 6,78E-05 | 1 |
| ZnO | 10 | -- | Fe6:ZnO | 10 | -- | 4,23046 | 7,80105 | 0,54229 | 1 | 0 |
| ZnO | 10 | -- | Fe6:ZnO | 20 | -- | 18,70565 | 7,80105 | 2,39784 | 1 | 0 |
| ZnO | 10 | -- | Fe6:ZnO | 30 | -- | 36,35959 | 7,80105 | 4,66086 | 0,00143 | 1 |
| ZnO | 10 | -- | Fe6:ZnO | 40 | -- | 52,14728 | 9,5543 | 5,45799 | 6,44E-05 | 1 |
| ZnO | 10 | -- | Fe12:ZnO | 0 | -- | -42,47643 | 7,80105 | -5,44496 | 6,78E-05 | 1 |
| ZnO | 10 | -- | Fe12:ZnO | 10 | -- | -3,33423 | 8,4261 | -0,3957 | 1 | 0 |
| ZnO | 10 | -- | Fe12:ZnO | 20 | -- | 24,42244 | 8,4261 | 2,89843 | 0,51786 | 0 |
| ZnO | 10 | -- | Fe12:ZnO | 30 | -- | 31,67198 | 8,4261 | 3,7588 | 0,03554 | 1 |
| ZnO | 10 | -- | Fe12:ZnO | 40 | -- | 40,84912 | 8,4261 | 4,84793 | 7,04E-04 | 1 |
| ZnO | 20 | -- | ZnO | 30 | -- | 15,78169 | 7,80105 | 2,02302 | 1 | 0 |
| ZnO | 20 | -- | ZnO | 40 | -- | 25,07453 | 9,5543 | 2,62442 | 1 | 0 |
| ZnO | 20 | -- | Fe6:ZnO | 0 | -- | -73,31089 | 7,80105 | -9,39756 | 3,11E-12 | 1 |
| ZnO | 20 | -- | Fe6:ZnO | 10 | -- | -26,604 | 7,80105 | -3,41031 | 0,11067 | 0 |
| ZnO | 20 | -- | Fe6:ZnO | 20 | -- | -12,12881 | 7,80105 | -1,55477 | 1 | 0 |
| ZnO | 20 | -- | Fe6:ZnO | 30 | -- | 5,52512 | 7,80105 | 0,70825 | 1 | 0 |
| ZnO | 20 | -- | Fe6:ZnO | 40 | -- | 21,31281 | 9,5543 | 2,2307 | 1 | 0 |
| ZnO | 20 | -- | Fe12:ZnO | 0 | -- | -73,31089 | 7,80105 | -9,39756 | 3,11E-12 | 1 |
| ZnO | 20 | -- | Fe12:ZnO | 10 | -- | -34,16869 | 8,4261 | -4,0551 | 0,01288 | 1 |
| ZnO | 20 | -- | Fe12:ZnO | 20 | -- | -6,41202 | 8,4261 | -0,76097 | 1 | 0 |
| ZnO | 20 | -- | Fe12:ZnO | 30 | -- | 0,83752 | 8,4261 | 0,0994 | 1 | 0 |
| ZnO | 20 | -- | Fe12:ZnO | 40 | -- | 10,01466 | 8,4261 | 1,18853 | 1 | 0 |
| ZnO | 30 | -- | ZnO | 40 | -- | 9,29284 | 9,5543 | 0,97263 | 1 | 0 |
| ZnO | 30 | -- | Fe6:ZnO | 0 | -- | -89,09258 | 7,80105 | -11,4206 | 5,66E-16 | 1 |
| ZnO | 30 | -- | Fe6:ZnO | 10 | -- | -42,3857 | 7,80105 | -5,43333 | 7,11E-05 | 1 |
| ZnO | 30 | -- | Fe6:ZnO | 20 | -- | -27,9105 | 7,80105 | -3,57779 | 0,06464 | 0 |
| ZnO | 30 | -- | Fe6:ZnO | 30 | -- | -10,25657 | 7,80105 | -1,31477 | 1 | 0 |
| ZnO | 30 | -- | Fe6:ZnO | 40 | -- | 5,53112 | 9,5543 | 0,57891 | 1 | 0 |
| ZnO | 30 | -- | Fe12:ZnO | 0 | -- | -89,09258 | 7,80105 | -11,4206 | 5,66E-16 | 1 |
| ZnO | 30 | -- | Fe12:ZnO | 10 | -- | -49,95038 | 8,4261 | -5,92806 | 9,50E-06 | 1 |
| ZnO | 30 | -- | Fe12:ZnO | 20 | -- | -22,19371 | 8,4261 | -2,63393 | 1 | 0 |
| ZnO | 30 | -- | Fe12:ZnO | 30 | -- | -14,94418 | 8,4261 | -1,77356 | 1 | 0 |
| ZnO | 30 | -- | Fe12:ZnO | 40 | -- | -5,76703 | 8,4261 | -0,68442 | 1 | 0 |
| ZnO | 40 | -- | Fe6:ZnO | 0 | -- | -98,38542 | 9,5543 | -10,2975 | 6,47E-14 | 1 |
| ZnO | 40 | -- | Fe6:ZnO | 10 | -- | -51,67854 | 9,5543 | -5,40893 | 7,84E-05 | 1 |
| ZnO | 40 | -- | Fe6:ZnO | 20 | -- | -37,20334 | 9,5543 | -3,89389 | 0,0225 | 1 |
| ZnO | 40 | -- | Fe6:ZnO | 30 | -- | -19,54941 | 9,5543 | -2,04614 | 1 | 0 |
| ZnO | 40 | -- | Fe6:ZnO | 40 | -- | -3,76172 | 11,03235 | -0,34097 | 1 | 0 |
| ZnO | 40 | -- | Fe12:ZnO | 0 | -- | -98,38542 | 9,5543 | -10,2975 | 6,47E-14 | 1 |
| ZnO | 40 | -- | Fe12:ZnO | 10 | -- | -59,24322 | 10,07111 | -5,88249 | 1,15E-05 | 1 |
| ZnO | 40 | -- | Fe12:ZnO | 20 | -- | -31,48655 | 10,07111 | -3,12642 | 0,26554 | 0 |
| ZnO | 40 | -- | Fe12:ZnO | 30 | -- | -24,23701 | 10,07111 | -2,40659 | 1 | 0 |
| ZnO | 40 | -- | Fe12:ZnO | 40 | -- | -15,05987 | 10,07111 | -1,49535 | 1 | 0 |
| Fe6:ZnO | 0 | -- | Fe6:ZnO | 10 | -- | 46,70689 | 7,80105 | 5,98725 | 7,44E-06 | 1 |
| Fe6:ZnO | 0 | -- | Fe6:ZnO | 20 | -- | 61,18208 | 7,80105 | 7,8428 | 2,70E-09 | 1 |

| | | | | | | | | | | |
|----------|----|---------|----------|----|---------|-----------|----------|-----------|----------|---|
| Fe6:ZnO | 0 | -- | Fe6:ZnO | 30 | -- | 78,83601 | 7,80105 | 10,10582 | 1,47E-13 | 1 |
| Fe6:ZnO | 0 | -- | Fe6:ZnO | 40 | -- | 94,6237 | 9,5543 | 9,90378 | 3,50E-13 | 1 |
| Fe6:ZnO | 0 | -- | Fe12:ZnO | 0 | -- | -1,28E-13 | 7,80105 | -1,64E-14 | 1 | 0 |
| Fe6:ZnO | 0 | -- | Fe12:ZnO | 10 | -- | 39,1422 | 8,4261 | 4,64535 | 0,00152 | 1 |
| Fe6:ZnO | 0 | -- | Fe12:ZnO | 20 | -- | 66,89887 | 8,4261 | 7,93948 | 1,77E-09 | 1 |
| Fe6:ZnO | 0 | -- | Fe12:ZnO | 30 | -- | 74,14841 | 8,4261 | 8,79985 | 4,17E-11 | 1 |
| Fe6:ZnO | 0 | -- | Fe12:ZnO | 40 | -- | 83,32555 | 8,4261 | 9,88898 | 3,73E-13 | 1 |
| Fe6:ZnO | 10 | -- | Fe6:ZnO | 20 | -- | 14,47519 | 7,80105 | 1,85554 | 1 | 0 |
| Fe6:ZnO | 10 | -- | Fe6:ZnO | 30 | -- | 32,12913 | 7,80105 | 4,11856 | 0,01031 | 1 |
| Fe6:ZnO | 10 | -- | Fe6:ZnO | 40 | -- | 47,91682 | 9,5543 | 5,01521 | 3,70E-04 | 1 |
| Fe6:ZnO | 10 | -- | Fe12:ZnO | 0 | -- | -46,70689 | 7,80105 | -5,98725 | 7,44E-06 | 1 |
| Fe6:ZnO | 10 | -- | Fe12:ZnO | 10 | -- | -7,56469 | 8,4261 | -0,89777 | 1 | 0 |
| Fe6:ZnO | 10 | -- | Fe12:ZnO | 20 | -- | 20,19198 | 8,4261 | 2,39636 | 1 | 0 |
| Fe6:ZnO | 10 | -- | Fe12:ZnO | 30 | -- | 27,44152 | 8,4261 | 3,25673 | 0,17873 | 0 |
| Fe6:ZnO | 10 | -- | Fe12:ZnO | 40 | -- | 36,61867 | 8,4261 | 4,34586 | 0,00457 | 1 |
| Fe6:ZnO | 20 | -- | Fe6:ZnO | 30 | -- | 17,65394 | 7,80105 | 2,26302 | 1 | 0 |
| Fe6:ZnO | 20 | -- | Fe6:ZnO | 40 | -- | 33,44163 | 9,5543 | 3,50017 | 0,0831 | 0 |
| Fe6:ZnO | 20 | -- | Fe12:ZnO | 0 | -- | -61,18208 | 7,80105 | -7,8428 | 2,70E-09 | 1 |
| Fe6:ZnO | 20 | -- | Fe12:ZnO | 10 | -- | -22,03988 | 8,4261 | -2,61567 | 1 | 0 |
| Fe6:ZnO | 20 | -- | Fe12:ZnO | 20 | -- | 5,71679 | 8,4261 | 0,67846 | 1 | 0 |
| Fe6:ZnO | 20 | -- | Fe12:ZnO | 30 | -- | 12,96633 | 8,4261 | 1,53883 | 1 | 0 |
| Fe6:ZnO | 20 | -- | Fe12:ZnO | 40 | -- | 22,14347 | 8,4261 | 2,62796 | 1 | 0 |
| Fe6:ZnO | 30 | -- | Fe6:ZnO | 40 | -- | 15,78769 | 9,5543 | 1,65242 | 1 | 0 |
| Fe6:ZnO | 30 | -- | Fe12:ZnO | 0 | -- | -78,83601 | 7,80105 | -10,1058 | 1,47E-13 | 1 |
| Fe6:ZnO | 30 | -- | Fe12:ZnO | 10 | -- | -39,69381 | 8,4261 | -4,71082 | 0,00118 | 1 |
| Fe6:ZnO | 30 | -- | Fe12:ZnO | 20 | -- | -11,93715 | 8,4261 | -1,41669 | 1 | 0 |
| Fe6:ZnO | 30 | -- | Fe12:ZnO | 30 | -- | -4,68761 | 8,4261 | -0,55632 | 1 | 0 |
| Fe6:ZnO | 30 | -- | Fe12:ZnO | 40 | -- | 4,48954 | 8,4261 | 0,53281 | 1 | 0 |
| Fe6:ZnO | 40 | -- | Fe12:ZnO | 0 | -- | -94,6237 | 9,5543 | -9,90378 | 3,50E-13 | 1 |
| Fe6:ZnO | 40 | -- | Fe12:ZnO | 10 | -- | -55,4815 | 10,07111 | -5,50897 | 5,25E-05 | 1 |
| Fe6:ZnO | 40 | -- | Fe12:ZnO | 20 | -- | -27,72483 | 10,07111 | -2,75291 | 0,77976 | 0 |
| Fe6:ZnO | 40 | -- | Fe12:ZnO | 30 | -- | -20,4753 | 10,07111 | -2,03307 | 1 | 0 |
| Fe6:ZnO | 40 | -- | Fe12:ZnO | 40 | -- | -11,29815 | 10,07111 | -1,12184 | 1 | 0 |
| Fe12:ZnO | 0 | -- | Fe12:ZnO | 10 | -- | 39,1422 | 8,4261 | 4,64535 | 0,00152 | 1 |
| Fe12:ZnO | 0 | -- | Fe12:ZnO | 20 | -- | 66,89887 | 8,4261 | 7,93948 | 1,77E-09 | 1 |
| Fe12:ZnO | 0 | -- | Fe12:ZnO | 30 | -- | 74,14841 | 8,4261 | 8,79985 | 4,17E-11 | 1 |
| Fe12:ZnO | 0 | -- | Fe12:ZnO | 40 | -- | 83,32555 | 8,4261 | 9,88898 | 3,73E-13 | 1 |
| Fe12:ZnO | 10 | -- | Fe12:ZnO | 20 | -- | 27,75667 | 9,00788 | 3,08138 | 0,30377 | 0 |
| Fe12:ZnO | 10 | -- | Fe12:ZnO | 30 | -- | 35,00621 | 9,00788 | 3,88618 | 0,0231 | 1 |
| Fe12:ZnO | 10 | -- | Fe12:ZnO | 40 | -- | 44,18335 | 9,00788 | 4,90497 | 5,66E-04 | 1 |
| Fe12:ZnO | 20 | -- | Fe12:ZnO | 30 | -- | 7,24954 | 9,00788 | 0,8048 | 1 | 0 |
| Fe12:ZnO | 20 | -- | Fe12:ZnO | 40 | -- | 16,42668 | 9,00788 | 1,82359 | 1 | 0 |
| Fe12:ZnO | 30 | -- | Fe12:ZnO | 40 | -- | 9,17714 | 9,00788 | 1,01879 | 1 | 0 |
| ZnO | -- | IST-EBV | ZnO | -- | Daudi | 26,91992 | 5,40473 | 4,98081 | 6,03E-05 | 1 |
| ZnO | -- | IST-EBV | Fe6:ZnO | -- | IST-EBV | -10,01321 | 5,40473 | -1,85268 | 1 | 0 |
| ZnO | -- | IST-EBV | Fe6:ZnO | -- | Daudi | 28,16647 | 5,40473 | 5,21145 | 2,45E-05 | 1 |

| | | | | | | | | | | |
|----------|----|---------|----------|----|---------|-----------|---------|----------|----------|---|
| ZnO | -- | IST-EBV | Fe12:ZnO | -- | IST-EBV | -12,14266 | 5,47928 | -2,21611 | 0,44638 | 0 |
| ZnO | -- | IST-EBV | Fe12:ZnO | -- | Daudi | 23,16246 | 5,47928 | 4,22728 | 0,001 | 1 |
| ZnO | -- | Daudi | Fe6:ZnO | -- | IST-EBV | -36,93312 | 5,40473 | -6,83349 | 3,01E-08 | 1 |
| ZnO | -- | Daudi | Fe6:ZnO | -- | Daudi | 1,24655 | 5,40473 | 0,23064 | 1 | 0 |
| ZnO | -- | Daudi | Fe12:ZnO | -- | IST-EBV | -39,06258 | 5,47928 | -7,12915 | 8,46E-09 | 1 |
| ZnO | -- | Daudi | Fe12:ZnO | -- | Daudi | -3,75746 | 5,47928 | -0,68576 | 1 | 0 |
| Fe6:ZnO | -- | IST-EBV | Fe6:ZnO | -- | Daudi | 38,17968 | 5,40473 | 7,06413 | 1,12E-08 | 1 |
| Fe6:ZnO | -- | IST-EBV | Fe12:ZnO | -- | IST-EBV | -2,12945 | 5,47928 | -0,38864 | 1 | 0 |
| Fe6:ZnO | -- | IST-EBV | Fe12:ZnO | -- | Daudi | 33,17567 | 5,47928 | 6,05475 | 8,03E-07 | 1 |
| Fe6:ZnO | -- | Daudi | Fe12:ZnO | -- | IST-EBV | -40,30913 | 5,47928 | -7,35665 | 3,17E-09 | 1 |
| Fe6:ZnO | -- | Daudi | Fe12:ZnO | -- | Daudi | -5,00401 | 5,47928 | -0,91326 | 1 | 0 |
| Fe12:ZnO | -- | IST-EBV | Fe12:ZnO | -- | Daudi | 35,30512 | 5,55283 | 6,35804 | 2,26E-07 | 1 |
| -- | 0 | IST-EBV | -- | 0 | Daudi | 5,68E-14 | 6,36953 | 8,92E-15 | 1 | 0 |
| -- | 0 | IST-EBV | -- | 10 | IST-EBV | 18,78562 | 6,54407 | 2,87063 | 0,24024 | 0 |
| -- | 0 | IST-EBV | -- | 10 | Daudi | 66,76472 | 6,54407 | 10,20232 | 4,17E-14 | 1 |
| -- | 0 | IST-EBV | -- | 20 | IST-EBV | 34,41693 | 6,54407 | 5,25925 | 6,09E-05 | 1 |
| -- | 0 | IST-EBV | -- | 20 | Daudi | 99,84429 | 6,54407 | 15,25721 | 6,70E-23 | 1 |
| -- | 0 | IST-EBV | -- | 30 | IST-EBV | 61,57196 | 6,54407 | 9,40882 | 1,27E-12 | 1 |
| -- | 0 | IST-EBV | -- | 30 | Daudi | 99,8127 | 6,54407 | 15,25238 | 6,82E-23 | 1 |
| -- | 0 | IST-EBV | -- | 40 | IST-EBV | 84,26456 | 7,50657 | 11,22545 | 5,48E-16 | 1 |
| -- | 0 | IST-EBV | -- | 40 | Daudi | 99,95856 | 7,50657 | 13,31615 | 1,11E-19 | 1 |
| -- | 0 | Daudi | -- | 10 | IST-EBV | 18,78562 | 6,54407 | 2,87063 | 0,24024 | 0 |
| -- | 0 | Daudi | -- | 10 | Daudi | 66,76472 | 6,54407 | 10,20232 | 4,17E-14 | 1 |
| -- | 0 | Daudi | -- | 20 | IST-EBV | 34,41693 | 6,54407 | 5,25925 | 6,09E-05 | 1 |
| -- | 0 | Daudi | -- | 20 | Daudi | 99,84429 | 6,54407 | 15,25721 | 6,70E-23 | 1 |
| -- | 0 | Daudi | -- | 30 | IST-EBV | 61,57196 | 6,54407 | 9,40882 | 1,27E-12 | 1 |
| -- | 0 | Daudi | -- | 30 | Daudi | 99,8127 | 6,54407 | 15,25238 | 6,82E-23 | 1 |
| -- | 0 | Daudi | -- | 40 | IST-EBV | 84,26456 | 7,50657 | 11,22545 | 5,48E-16 | 1 |
| -- | 0 | Daudi | -- | 40 | Daudi | 99,95856 | 7,50657 | 13,31615 | 1,11E-19 | 1 |
| -- | 10 | IST-EBV | -- | 10 | Daudi | 47,97909 | 6,71408 | 7,14605 | 2,36E-08 | 1 |
| -- | 10 | IST-EBV | -- | 20 | IST-EBV | 15,63131 | 6,71408 | 2,32814 | 1 | 0 |
| -- | 10 | IST-EBV | -- | 20 | Daudi | 81,05867 | 6,71408 | 12,07294 | 1,64E-17 | 1 |
| -- | 10 | IST-EBV | -- | 30 | IST-EBV | 42,78634 | 6,71408 | 6,37263 | 6,38E-07 | 1 |
| -- | 10 | IST-EBV | -- | 30 | Daudi | 81,02708 | 6,71408 | 12,06824 | 1,67E-17 | 1 |
| -- | 10 | IST-EBV | -- | 40 | IST-EBV | 65,47894 | 7,65522 | 8,5535 | 5,23E-11 | 1 |
| -- | 10 | IST-EBV | -- | 40 | Daudi | 81,17293 | 7,65522 | 10,6036 | 7,54E-15 | 1 |
| -- | 10 | Daudi | -- | 20 | IST-EBV | -32,34779 | 6,71408 | -4,81791 | 3,38E-04 | 1 |
| -- | 10 | Daudi | -- | 20 | Daudi | 33,07958 | 6,71408 | 4,9269 | 2,23E-04 | 1 |
| -- | 10 | Daudi | -- | 30 | IST-EBV | -5,19275 | 6,71408 | -0,77341 | 1 | 0 |
| -- | 10 | Daudi | -- | 30 | Daudi | 33,04799 | 6,71408 | 4,92219 | 2,27E-04 | 1 |
| -- | 10 | Daudi | -- | 40 | IST-EBV | 17,49984 | 7,65522 | 2,286 | 1 | 0 |
| -- | 10 | Daudi | -- | 40 | Daudi | 33,19384 | 7,65522 | 4,3361 | 0,00203 | 1 |
| -- | 20 | IST-EBV | -- | 20 | Daudi | 65,42736 | 6,71408 | 9,74481 | 2,97E-13 | 1 |
| -- | 20 | IST-EBV | -- | 30 | IST-EBV | 27,15504 | 6,71408 | 4,04449 | 0,00573 | 1 |
| -- | 20 | IST-EBV | -- | 30 | Daudi | 65,39577 | 6,71408 | 9,7401 | 3,03E-13 | 1 |
| -- | 20 | IST-EBV | -- | 40 | IST-EBV | 49,84763 | 7,65522 | 6,51158 | 3,55E-07 | 1 |

| | | | | | | | | | | |
|-----|----|---------|----------|----|---------|-----------|----------|-----------|----------|---|
| -- | 20 | IST-EBV | -- | 40 | Daudi | 65,54163 | 7,65522 | 8,56169 | 5,04E-11 | 1 |
| -- | 20 | Daudi | -- | 30 | IST-EBV | -38,27233 | 6,71408 | -5,70031 | 1,04E-05 | 1 |
| -- | 20 | Daudi | -- | 30 | Daudi | -0,03159 | 6,71408 | -0,00471 | 1 | 0 |
| -- | 20 | Daudi | -- | 40 | IST-EBV | -15,57973 | 7,65522 | -2,03518 | 1 | 0 |
| -- | 20 | Daudi | -- | 40 | Daudi | 0,11426 | 7,65522 | 0,01493 | 1 | 0 |
| -- | 30 | IST-EBV | -- | 30 | Daudi | 38,24074 | 6,71408 | 5,69561 | 1,06E-05 | 1 |
| -- | 30 | IST-EBV | -- | 40 | IST-EBV | 22,6926 | 7,65522 | 2,96433 | 0,18358 | 0 |
| -- | 30 | IST-EBV | -- | 40 | Daudi | 38,38659 | 7,65522 | 5,01443 | 1,59E-04 | 1 |
| -- | 30 | Daudi | -- | 40 | IST-EBV | -15,54814 | 7,65522 | -2,03105 | 1 | 0 |
| -- | 30 | Daudi | -- | 40 | Daudi | 0,14585 | 7,65522 | 0,01905 | 1 | 0 |
| -- | 40 | IST-EBV | -- | 40 | Daudi | 15,694 | 8,49271 | 1,84794 | 1 | 0 |
| ZnO | 0 | IST-EBV | ZnO | 0 | Daudi | 8,53E-14 | 11,03235 | 7,73E-15 | 1 | 0 |
| ZnO | 0 | IST-EBV | ZnO | 10 | IST-EBV | 13,92063 | 11,03235 | 1,2618 | 1 | 0 |
| ZnO | 0 | IST-EBV | ZnO | 10 | Daudi | 71,03223 | 11,03235 | 6,43854 | 4,67E-06 | 1 |
| ZnO | 0 | IST-EBV | ZnO | 20 | IST-EBV | 47,0889 | 11,03235 | 4,26826 | 0,02507 | 1 |
| ZnO | 0 | IST-EBV | ZnO | 20 | Daudi | 99,53288 | 11,03235 | 9,02191 | 6,58E-11 | 1 |
| ZnO | 0 | IST-EBV | ZnO | 30 | IST-EBV | 78,18516 | 11,03235 | 7,0869 | 2,94E-07 | 1 |
| ZnO | 0 | IST-EBV | ZnO | 30 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| ZnO | 0 | IST-EBV | ZnO | 40 | IST-EBV | 96,77084 | 13,51182 | 7,16194 | 2,13E-07 | 1 |
| ZnO | 0 | IST-EBV | ZnO | 40 | Daudi | 100 | 13,51182 | 7,40093 | 7,59E-08 | 1 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 0 | IST-EBV | -4,26E-14 | 11,03235 | -3,86E-15 | 1 | 0 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 0 | Daudi | 2,84E-14 | 11,03235 | 2,58E-15 | 1 | 0 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 10 | IST-EBV | 16,6159 | 11,03235 | 1,50611 | 1 | 0 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 10 | Daudi | 76,79787 | 11,03235 | 6,96115 | 5,05E-07 | 1 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 20 | IST-EBV | 22,36416 | 11,03235 | 2,02714 | 1 | 0 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 20 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 30 | IST-EBV | 57,67203 | 11,03235 | 5,22754 | 6,67E-04 | 1 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 30 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | 89,24741 | 13,51182 | 6,60514 | 2,31E-06 | 1 |
| ZnO | 0 | IST-EBV | Fe6:ZnO | 40 | Daudi | 100 | 13,51182 | 7,40093 | 7,59E-08 | 1 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -9,95E-14 | 11,03235 | -9,02E-15 | 1 | 0 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 0 | Daudi | -1,28E-13 | 11,03235 | -1,16E-14 | 1 | 0 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | 25,82035 | 11,9163 | 2,16681 | 1 | 0 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 10 | Daudi | 52,46405 | 11,9163 | 4,40271 | 0,0154 | 1 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | 33,79774 | 11,9163 | 2,83626 | 1 | 0 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 20 | Daudi | 100 | 11,9163 | 8,39186 | 1,02E-09 | 1 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 48,8587 | 11,9163 | 4,10016 | 0,04557 | 1 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 30 | Daudi | 99,43811 | 11,9163 | 8,34471 | 1,26E-09 | 1 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 66,77543 | 11,9163 | 5,6037 | 1,48E-04 | 1 |
| ZnO | 0 | IST-EBV | Fe12:ZnO | 40 | Daudi | 99,87567 | 11,9163 | 8,38143 | 1,07E-09 | 1 |
| ZnO | 0 | Daudi | ZnO | 10 | IST-EBV | 13,92063 | 11,03235 | 1,2618 | 1 | 0 |
| ZnO | 0 | Daudi | ZnO | 10 | Daudi | 71,03223 | 11,03235 | 6,43854 | 4,67E-06 | 1 |
| ZnO | 0 | Daudi | ZnO | 20 | IST-EBV | 47,0889 | 11,03235 | 4,26826 | 0,02507 | 1 |
| ZnO | 0 | Daudi | ZnO | 20 | Daudi | 99,53288 | 11,03235 | 9,02191 | 6,58E-11 | 1 |
| ZnO | 0 | Daudi | ZnO | 30 | IST-EBV | 78,18516 | 11,03235 | 7,0869 | 2,94E-07 | 1 |
| ZnO | 0 | Daudi | ZnO | 30 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |

| | | | | | | | | | | |
|-----|----|---------|----------|----|---------|-----------|----------|-----------|----------|---|
| ZnO | 0 | Daudi | ZnO | 40 | IST-EBV | 96,77084 | 13,51182 | 7,16194 | 2,13E-07 | 1 |
| ZnO | 0 | Daudi | ZnO | 40 | Daudi | 100 | 13,51182 | 7,40093 | 7,59E-08 | 1 |
| ZnO | 0 | Daudi | Fe6:ZnO | 0 | IST-EBV | -1,28E-13 | 11,03235 | -1,16E-14 | 1 | 0 |
| ZnO | 0 | Daudi | Fe6:ZnO | 0 | Daudi | -5,68E-14 | 11,03235 | -5,15E-15 | 1 | 0 |
| ZnO | 0 | Daudi | Fe6:ZnO | 10 | IST-EBV | 16,6159 | 11,03235 | 1,50611 | 1 | 0 |
| ZnO | 0 | Daudi | Fe6:ZnO | 10 | Daudi | 76,79787 | 11,03235 | 6,96115 | 5,05E-07 | 1 |
| ZnO | 0 | Daudi | Fe6:ZnO | 20 | IST-EBV | 22,36416 | 11,03235 | 2,02714 | 1 | 0 |
| ZnO | 0 | Daudi | Fe6:ZnO | 20 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| ZnO | 0 | Daudi | Fe6:ZnO | 30 | IST-EBV | 57,67203 | 11,03235 | 5,22754 | 6,67E-04 | 1 |
| ZnO | 0 | Daudi | Fe6:ZnO | 30 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| ZnO | 0 | Daudi | Fe6:ZnO | 40 | IST-EBV | 89,24741 | 13,51182 | 6,60514 | 2,31E-06 | 1 |
| ZnO | 0 | Daudi | Fe6:ZnO | 40 | Daudi | 100 | 13,51182 | 7,40093 | 7,59E-08 | 1 |
| ZnO | 0 | Daudi | Fe12:ZnO | 0 | IST-EBV | -1,85E-13 | 11,03235 | -1,67E-14 | 1 | 0 |
| ZnO | 0 | Daudi | Fe12:ZnO | 0 | Daudi | -2,13E-13 | 11,03235 | -1,93E-14 | 1 | 0 |
| ZnO | 0 | Daudi | Fe12:ZnO | 10 | IST-EBV | 25,82035 | 11,9163 | 2,16681 | 1 | 0 |
| ZnO | 0 | Daudi | Fe12:ZnO | 10 | Daudi | 52,46405 | 11,9163 | 4,40271 | 0,0154 | 1 |
| ZnO | 0 | Daudi | Fe12:ZnO | 20 | IST-EBV | 33,79774 | 11,9163 | 2,83626 | 1 | 0 |
| ZnO | 0 | Daudi | Fe12:ZnO | 20 | Daudi | 100 | 11,9163 | 8,39186 | 1,02E-09 | 1 |
| ZnO | 0 | Daudi | Fe12:ZnO | 30 | IST-EBV | 48,8587 | 11,9163 | 4,10016 | 0,04557 | 1 |
| ZnO | 0 | Daudi | Fe12:ZnO | 30 | Daudi | 99,43811 | 11,9163 | 8,34471 | 1,26E-09 | 1 |
| ZnO | 0 | Daudi | Fe12:ZnO | 40 | IST-EBV | 66,77543 | 11,9163 | 5,6037 | 1,48E-04 | 1 |
| ZnO | 0 | Daudi | Fe12:ZnO | 40 | Daudi | 99,87567 | 11,9163 | 8,38143 | 1,07E-09 | 1 |
| ZnO | 10 | IST-EBV | ZnO | 10 | Daudi | 57,1116 | 11,03235 | 5,17674 | 8,15E-04 | 1 |
| ZnO | 10 | IST-EBV | ZnO | 20 | IST-EBV | 33,16827 | 11,03235 | 3,00645 | 1 | 0 |
| ZnO | 10 | IST-EBV | ZnO | 20 | Daudi | 85,61226 | 11,03235 | 7,76011 | 1,60E-08 | 1 |
| ZnO | 10 | IST-EBV | ZnO | 30 | IST-EBV | 64,26454 | 11,03235 | 5,8251 | 6,01E-05 | 1 |
| ZnO | 10 | IST-EBV | ZnO | 30 | Daudi | 86,07937 | 11,03235 | 7,80245 | 1,33E-08 | 1 |
| ZnO | 10 | IST-EBV | ZnO | 40 | IST-EBV | 82,85022 | 13,51182 | 6,13169 | 1,69E-05 | 1 |
| ZnO | 10 | IST-EBV | ZnO | 40 | Daudi | 86,07937 | 13,51182 | 6,37067 | 6,22E-06 | 1 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 0 | IST-EBV | -13,92063 | 11,03235 | -1,2618 | 1 | 0 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 0 | Daudi | -13,92063 | 11,03235 | -1,2618 | 1 | 0 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 10 | IST-EBV | 2,69528 | 11,03235 | 0,24431 | 1 | 0 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 10 | Daudi | 62,87724 | 11,03235 | 5,69935 | 1,01E-04 | 1 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 20 | IST-EBV | 8,44353 | 11,03235 | 0,76534 | 1 | 0 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 20 | Daudi | 86,07937 | 11,03235 | 7,80245 | 1,33E-08 | 1 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 30 | IST-EBV | 43,7514 | 11,03235 | 3,96574 | 0,07281 | 0 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 30 | Daudi | 86,07937 | 11,03235 | 7,80245 | 1,33E-08 | 1 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | 75,32678 | 13,51182 | 5,57488 | 1,67E-04 | 1 |
| ZnO | 10 | IST-EBV | Fe6:ZnO | 40 | Daudi | 86,07937 | 13,51182 | 6,37067 | 6,22E-06 | 1 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -13,92063 | 11,03235 | -1,2618 | 1 | 0 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 0 | Daudi | -13,92063 | 11,03235 | -1,2618 | 1 | 0 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | 11,89972 | 11,9163 | 0,99861 | 1 | 0 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 10 | Daudi | 38,54343 | 11,9163 | 3,23451 | 0,79271 | 0 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | 19,87711 | 11,9163 | 1,66806 | 1 | 0 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 20 | Daudi | 86,07937 | 11,9163 | 7,22366 | 1,63E-07 | 1 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 34,93808 | 11,9163 | 2,93196 | 1 | 0 |

| | | | | | | | | | | |
|-----|----|---------|----------|----|---------|-----------|----------|----------|----------|---|
| ZnO | 10 | IST-EBV | Fe12:ZnO | 30 | Daudi | 85,51748 | 11,9163 | 7,17651 | 2,00E-07 | 1 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 52,85481 | 11,9163 | 4,4355 | 0,01366 | 1 |
| ZnO | 10 | IST-EBV | Fe12:ZnO | 40 | Daudi | 85,95504 | 11,9163 | 7,21323 | 1,71E-07 | 1 |
| ZnO | 10 | Daudi | ZnO | 20 | IST-EBV | -23,94333 | 11,03235 | -2,17028 | 1 | 0 |
| ZnO | 10 | Daudi | ZnO | 20 | Daudi | 28,50066 | 11,03235 | 2,58337 | 1 | 0 |
| ZnO | 10 | Daudi | ZnO | 30 | IST-EBV | 7,15294 | 11,03235 | 0,64836 | 1 | 0 |
| ZnO | 10 | Daudi | ZnO | 30 | Daudi | 28,96777 | 11,03235 | 2,62571 | 1 | 0 |
| ZnO | 10 | Daudi | ZnO | 40 | IST-EBV | 25,73862 | 13,51182 | 1,9049 | 1 | 0 |
| ZnO | 10 | Daudi | ZnO | 40 | Daudi | 28,96777 | 13,51182 | 2,14388 | 1 | 0 |
| ZnO | 10 | Daudi | Fe6:ZnO | 0 | IST-EBV | -71,03223 | 11,03235 | -6,43854 | 4,67E-06 | 1 |
| ZnO | 10 | Daudi | Fe6:ZnO | 0 | Daudi | -71,03223 | 11,03235 | -6,43854 | 4,67E-06 | 1 |
| ZnO | 10 | Daudi | Fe6:ZnO | 10 | IST-EBV | -54,41632 | 11,03235 | -4,93243 | 0,00211 | 1 |
| ZnO | 10 | Daudi | Fe6:ZnO | 10 | Daudi | 5,76564 | 11,03235 | 0,52261 | 1 | 0 |
| ZnO | 10 | Daudi | Fe6:ZnO | 20 | IST-EBV | -48,66807 | 11,03235 | -4,4114 | 0,01492 | 1 |
| ZnO | 10 | Daudi | Fe6:ZnO | 20 | Daudi | 28,96777 | 11,03235 | 2,62571 | 1 | 0 |
| ZnO | 10 | Daudi | Fe6:ZnO | 30 | IST-EBV | -13,3602 | 11,03235 | -1,211 | 1 | 0 |
| ZnO | 10 | Daudi | Fe6:ZnO | 30 | Daudi | 28,96777 | 11,03235 | 2,62571 | 1 | 0 |
| ZnO | 10 | Daudi | Fe6:ZnO | 40 | IST-EBV | 18,21518 | 13,51182 | 1,34809 | 1 | 0 |
| ZnO | 10 | Daudi | Fe6:ZnO | 40 | Daudi | 28,96777 | 13,51182 | 2,14388 | 1 | 0 |
| ZnO | 10 | Daudi | Fe12:ZnO | 0 | IST-EBV | -71,03223 | 11,03235 | -6,43854 | 4,67E-06 | 1 |
| ZnO | 10 | Daudi | Fe12:ZnO | 0 | Daudi | -71,03223 | 11,03235 | -6,43854 | 4,67E-06 | 1 |
| ZnO | 10 | Daudi | Fe12:ZnO | 10 | IST-EBV | -45,21188 | 11,9163 | -3,79412 | 0,13077 | 0 |
| ZnO | 10 | Daudi | Fe12:ZnO | 10 | Daudi | -18,56817 | 11,9163 | -1,55822 | 1 | 0 |
| ZnO | 10 | Daudi | Fe12:ZnO | 20 | IST-EBV | -37,23449 | 11,9163 | -3,12467 | 1 | 0 |
| ZnO | 10 | Daudi | Fe12:ZnO | 20 | Daudi | 28,96777 | 11,9163 | 2,43094 | 1 | 0 |
| ZnO | 10 | Daudi | Fe12:ZnO | 30 | IST-EBV | -22,17352 | 11,9163 | -1,86077 | 1 | 0 |
| ZnO | 10 | Daudi | Fe12:ZnO | 30 | Daudi | 28,40588 | 11,9163 | 2,38378 | 1 | 0 |
| ZnO | 10 | Daudi | Fe12:ZnO | 40 | IST-EBV | -4,25679 | 11,9163 | -0,35722 | 1 | 0 |
| ZnO | 10 | Daudi | Fe12:ZnO | 40 | Daudi | 28,84344 | 11,9163 | 2,4205 | 1 | 0 |
| ZnO | 20 | IST-EBV | ZnO | 20 | Daudi | 52,44399 | 11,03235 | 4,75365 | 0,00417 | 1 |
| ZnO | 20 | IST-EBV | ZnO | 30 | IST-EBV | 31,09627 | 11,03235 | 2,81864 | 1 | 0 |
| ZnO | 20 | IST-EBV | ZnO | 30 | Daudi | 52,9111 | 11,03235 | 4,79599 | 0,00355 | 1 |
| ZnO | 20 | IST-EBV | ZnO | 40 | IST-EBV | 49,68194 | 13,51182 | 3,67693 | 0,1934 | 0 |
| ZnO | 20 | IST-EBV | ZnO | 40 | Daudi | 52,9111 | 13,51182 | 3,91591 | 0,08643 | 0 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 0 | IST-EBV | -47,0889 | 11,03235 | -4,26826 | 0,02507 | 1 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 0 | Daudi | -47,0889 | 11,03235 | -4,26826 | 0,02507 | 1 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 10 | IST-EBV | -30,47299 | 11,03235 | -2,76215 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 10 | Daudi | 29,70897 | 11,03235 | 2,6929 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 20 | IST-EBV | -24,72474 | 11,03235 | -2,24111 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 20 | Daudi | 52,9111 | 11,03235 | 4,79599 | 0,00355 | 1 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 30 | IST-EBV | 10,58313 | 11,03235 | 0,95928 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 30 | Daudi | 52,9111 | 11,03235 | 4,79599 | 0,00355 | 1 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | 42,15851 | 13,51182 | 3,12012 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe6:ZnO | 40 | Daudi | 52,9111 | 13,51182 | 3,91591 | 0,08643 | 0 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -47,0889 | 11,03235 | -4,26826 | 0,02507 | 1 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 0 | Daudi | -47,0889 | 11,03235 | -4,26826 | 0,02507 | 1 |

| | | | | | | | | | | |
|-----|----|---------|----------|----|---------|-----------|----------|----------|----------|---|
| ZnO | 20 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | -21,26855 | 11,9163 | -1,78483 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 10 | Daudi | 5,37516 | 11,9163 | 0,45108 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | -13,29116 | 11,9163 | -1,11538 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 20 | Daudi | 52,9111 | 11,9163 | 4,44023 | 0,01343 | 1 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 1,76981 | 11,9163 | 0,14852 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 30 | Daudi | 52,34921 | 11,9163 | 4,39307 | 0,01596 | 1 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 19,68654 | 11,9163 | 1,65207 | 1 | 0 |
| ZnO | 20 | IST-EBV | Fe12:ZnO | 40 | Daudi | 52,78677 | 11,9163 | 4,42979 | 0,01395 | 1 |
| ZnO | 20 | Daudi | ZnO | 30 | IST-EBV | -21,34772 | 11,03235 | -1,93501 | 1 | 0 |
| ZnO | 20 | Daudi | ZnO | 30 | Daudi | 0,46712 | 11,03235 | 0,04234 | 1 | 0 |
| ZnO | 20 | Daudi | ZnO | 40 | IST-EBV | -2,76204 | 13,51182 | -0,20442 | 1 | 0 |
| ZnO | 20 | Daudi | ZnO | 40 | Daudi | 0,46712 | 13,51182 | 0,03457 | 1 | 0 |
| ZnO | 20 | Daudi | Fe6:ZnO | 0 | IST-EBV | -99,53288 | 11,03235 | -9,02191 | 6,58E-11 | 1 |
| ZnO | 20 | Daudi | Fe6:ZnO | 0 | Daudi | -99,53288 | 11,03235 | -9,02191 | 6,58E-11 | 1 |
| ZnO | 20 | Daudi | Fe6:ZnO | 10 | IST-EBV | -82,91698 | 11,03235 | -7,5158 | 4,62E-08 | 1 |
| ZnO | 20 | Daudi | Fe6:ZnO | 10 | Daudi | -22,73501 | 11,03235 | -2,06076 | 1 | 0 |
| ZnO | 20 | Daudi | Fe6:ZnO | 20 | IST-EBV | -77,16873 | 11,03235 | -6,99477 | 4,37E-07 | 1 |
| ZnO | 20 | Daudi | Fe6:ZnO | 20 | Daudi | 0,46712 | 11,03235 | 0,04234 | 1 | 0 |
| ZnO | 20 | Daudi | Fe6:ZnO | 30 | IST-EBV | -41,86085 | 11,03235 | -3,79437 | 0,13066 | 0 |
| ZnO | 20 | Daudi | Fe6:ZnO | 30 | Daudi | 0,46712 | 11,03235 | 0,04234 | 1 | 0 |
| ZnO | 20 | Daudi | Fe6:ZnO | 40 | IST-EBV | -10,28548 | 13,51182 | -0,76122 | 1 | 0 |
| ZnO | 20 | Daudi | Fe6:ZnO | 40 | Daudi | 0,46712 | 13,51182 | 0,03457 | 1 | 0 |
| ZnO | 20 | Daudi | Fe12:ZnO | 0 | IST-EBV | -99,53288 | 11,03235 | -9,02191 | 6,58E-11 | 1 |
| ZnO | 20 | Daudi | Fe12:ZnO | 0 | Daudi | -99,53288 | 11,03235 | -9,02191 | 6,58E-11 | 1 |
| ZnO | 20 | Daudi | Fe12:ZnO | 10 | IST-EBV | -73,71254 | 11,9163 | -6,18586 | 1,35E-05 | 1 |
| ZnO | 20 | Daudi | Fe12:ZnO | 10 | Daudi | -47,06883 | 11,9163 | -3,94995 | 0,07689 | 0 |
| ZnO | 20 | Daudi | Fe12:ZnO | 20 | IST-EBV | -65,73515 | 11,9163 | -5,5164 | 2,11E-04 | 1 |
| ZnO | 20 | Daudi | Fe12:ZnO | 20 | Daudi | 0,46712 | 11,9163 | 0,0392 | 1 | 0 |
| ZnO | 20 | Daudi | Fe12:ZnO | 30 | IST-EBV | -50,67418 | 11,9163 | -4,25251 | 0,02653 | 1 |
| ZnO | 20 | Daudi | Fe12:ZnO | 30 | Daudi | -0,09477 | 11,9163 | -0,00795 | 1 | 0 |
| ZnO | 20 | Daudi | Fe12:ZnO | 40 | IST-EBV | -32,75745 | 11,9163 | -2,74896 | 1 | 0 |
| ZnO | 20 | Daudi | Fe12:ZnO | 40 | Daudi | 0,34279 | 11,9163 | 0,02877 | 1 | 0 |
| ZnO | 30 | IST-EBV | ZnO | 30 | Daudi | 21,81484 | 11,03235 | 1,97735 | 1 | 0 |
| ZnO | 30 | IST-EBV | ZnO | 40 | IST-EBV | 18,58568 | 13,51182 | 1,37551 | 1 | 0 |
| ZnO | 30 | IST-EBV | ZnO | 40 | Daudi | 21,81484 | 13,51182 | 1,6145 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 0 | IST-EBV | -78,18516 | 11,03235 | -7,0869 | 2,94E-07 | 1 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 0 | Daudi | -78,18516 | 11,03235 | -7,0869 | 2,94E-07 | 1 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 10 | IST-EBV | -61,56926 | 11,03235 | -5,58079 | 1,63E-04 | 1 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 10 | Daudi | -1,3873 | 11,03235 | -0,12575 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 20 | IST-EBV | -55,82101 | 11,03235 | -5,05976 | 0,00129 | 1 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 20 | Daudi | 21,81484 | 11,03235 | 1,97735 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 30 | IST-EBV | -20,51314 | 11,03235 | -1,85936 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 30 | Daudi | 21,81484 | 11,03235 | 1,97735 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | 11,06224 | 13,51182 | 0,81871 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe6:ZnO | 40 | Daudi | 21,81484 | 13,51182 | 1,6145 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -78,18516 | 11,03235 | -7,0869 | 2,94E-07 | 1 |

| | | | | | | | | | | |
|-----|----|---------|----------|----|---------|-----------|----------|-----------|----------|---|
| ZnO | 30 | IST-EBV | Fe12:ZnO | 0 | Daudi | -78,18516 | 11,03235 | -7,0869 | 2,94E-07 | 1 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | -52,36482 | 11,9163 | -4,39438 | 0,01588 | 1 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 10 | Daudi | -25,72111 | 11,9163 | -2,15848 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | -44,38743 | 11,9163 | -3,72493 | 0,1649 | 0 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 20 | Daudi | 21,81484 | 11,9163 | 1,83067 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | -29,32646 | 11,9163 | -2,46104 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 30 | Daudi | 21,25295 | 11,9163 | 1,78352 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | -11,40973 | 11,9163 | -0,95749 | 1 | 0 |
| ZnO | 30 | IST-EBV | Fe12:ZnO | 40 | Daudi | 21,6905 | 11,9163 | 1,82024 | 1 | 0 |
| ZnO | 30 | Daudi | ZnO | 40 | IST-EBV | -3,22916 | 13,51182 | -0,23899 | 1 | 0 |
| ZnO | 30 | Daudi | ZnO | 40 | Daudi | -3,84E-13 | 13,51182 | -2,84E-14 | 1 | 0 |
| ZnO | 30 | Daudi | Fe6:ZnO | 0 | IST-EBV | -100 | 11,03235 | -9,06425 | 5,47E-11 | 1 |
| ZnO | 30 | Daudi | Fe6:ZnO | 0 | Daudi | -100 | 11,03235 | -9,06425 | 5,47E-11 | 1 |
| ZnO | 30 | Daudi | Fe6:ZnO | 10 | IST-EBV | -83,3841 | 11,03235 | -7,55814 | 3,84E-08 | 1 |
| ZnO | 30 | Daudi | Fe6:ZnO | 10 | Daudi | -23,20213 | 11,03235 | -2,1031 | 1 | 0 |
| ZnO | 30 | Daudi | Fe6:ZnO | 20 | IST-EBV | -77,63584 | 11,03235 | -7,03711 | 3,65E-07 | 1 |
| ZnO | 30 | Daudi | Fe6:ZnO | 20 | Daudi | -1,33E-13 | 11,03235 | -1,20E-14 | 1 | 0 |
| ZnO | 30 | Daudi | Fe6:ZnO | 30 | IST-EBV | -42,32797 | 11,03235 | -3,83671 | 0,11323 | 0 |
| ZnO | 30 | Daudi | Fe6:ZnO | 30 | Daudi | -5,37E-14 | 11,03235 | -4,87E-15 | 1 | 0 |
| ZnO | 30 | Daudi | Fe6:ZnO | 40 | IST-EBV | -10,75259 | 13,51182 | -0,79579 | 1 | 0 |
| ZnO | 30 | Daudi | Fe6:ZnO | 40 | Daudi | -2,75E-14 | 13,51182 | -2,04E-15 | 1 | 0 |
| ZnO | 30 | Daudi | Fe12:ZnO | 0 | IST-EBV | -100 | 11,03235 | -9,06425 | 5,47E-11 | 1 |
| ZnO | 30 | Daudi | Fe12:ZnO | 0 | Daudi | -100 | 11,03235 | -9,06425 | 5,47E-11 | 1 |
| ZnO | 30 | Daudi | Fe12:ZnO | 10 | IST-EBV | -74,17965 | 11,9163 | -6,22506 | 1,15E-05 | 1 |
| ZnO | 30 | Daudi | Fe12:ZnO | 10 | Daudi | -47,53595 | 11,9163 | -3,98915 | 0,06714 | 0 |
| ZnO | 30 | Daudi | Fe12:ZnO | 20 | IST-EBV | -66,20226 | 11,9163 | -5,5556 | 1,80E-04 | 1 |
| ZnO | 30 | Daudi | Fe12:ZnO | 20 | Daudi | -5,82E-14 | 11,9163 | -4,88E-15 | 1 | 0 |
| ZnO | 30 | Daudi | Fe12:ZnO | 30 | IST-EBV | -51,1413 | 11,9163 | -4,29171 | 0,02304 | 1 |
| ZnO | 30 | Daudi | Fe12:ZnO | 30 | Daudi | -0,56189 | 11,9163 | -0,04715 | 1 | 0 |
| ZnO | 30 | Daudi | Fe12:ZnO | 40 | IST-EBV | -33,22457 | 11,9163 | -2,78816 | 1 | 0 |
| ZnO | 30 | Daudi | Fe12:ZnO | 40 | Daudi | -0,12433 | 11,9163 | -0,01043 | 1 | 0 |
| ZnO | 40 | IST-EBV | ZnO | 40 | Daudi | 3,22916 | 15,6021 | 0,20697 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 0 | IST-EBV | -96,77084 | 13,51182 | -7,16194 | 2,13E-07 | 1 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 0 | Daudi | -96,77084 | 13,51182 | -7,16194 | 2,13E-07 | 1 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 10 | IST-EBV | -80,15494 | 13,51182 | -5,93221 | 3,87E-05 | 1 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 10 | Daudi | -19,97297 | 13,51182 | -1,47819 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 20 | IST-EBV | -74,40669 | 13,51182 | -5,50679 | 2,19E-04 | 1 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 20 | Daudi | 3,22916 | 13,51182 | 0,23899 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 30 | IST-EBV | -39,09881 | 13,51182 | -2,89368 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 30 | Daudi | 3,22916 | 13,51182 | 0,23899 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | -7,52344 | 15,6021 | -0,48221 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe6:ZnO | 40 | Daudi | 3,22916 | 15,6021 | 0,20697 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -96,77084 | 13,51182 | -7,16194 | 2,13E-07 | 1 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 0 | Daudi | -96,77084 | 13,51182 | -7,16194 | 2,13E-07 | 1 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | -70,9505 | 14,24271 | -4,98153 | 0,00174 | 1 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 10 | Daudi | -44,30679 | 14,24271 | -3,11084 | 1 | 0 |

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|---------|----|---------|----------|----|---------|-----------|----------|-----------|----------|---|
| ZnO | 40 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | -62,9731 | 14,24271 | -4,42143 | 0,01439 | 1 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 20 | Daudi | 3,22916 | 14,24271 | 0,22672 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | -47,91214 | 14,24271 | -3,36398 | 0,53059 | 0 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 30 | Daudi | 2,66727 | 14,24271 | 0,18727 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | -29,99541 | 14,24271 | -2,10602 | 1 | 0 |
| ZnO | 40 | IST-EBV | Fe12:ZnO | 40 | Daudi | 3,10483 | 14,24271 | 0,21799 | 1 | 0 |
| ZnO | 40 | Daudi | Fe6:ZnO | 0 | IST-EBV | -100 | 13,51182 | -7,40093 | 7,59E-08 | 1 |
| ZnO | 40 | Daudi | Fe6:ZnO | 0 | Daudi | -100 | 13,51182 | -7,40093 | 7,59E-08 | 1 |
| ZnO | 40 | Daudi | Fe6:ZnO | 10 | IST-EBV | -83,3841 | 13,51182 | -6,1712 | 1,43E-05 | 1 |
| ZnO | 40 | Daudi | Fe6:ZnO | 10 | Daudi | -23,20213 | 13,51182 | -1,71717 | 1 | 0 |
| ZnO | 40 | Daudi | Fe6:ZnO | 20 | IST-EBV | -77,63584 | 13,51182 | -5,74577 | 8,32E-05 | 1 |
| ZnO | 40 | Daudi | Fe6:ZnO | 20 | Daudi | 2,51E-13 | 13,51182 | 1,86E-14 | 1 | 0 |
| ZnO | 40 | Daudi | Fe6:ZnO | 30 | IST-EBV | -42,32797 | 13,51182 | -3,13266 | 1 | 0 |
| ZnO | 40 | Daudi | Fe6:ZnO | 30 | Daudi | 3,30E-13 | 13,51182 | 2,44E-14 | 1 | 0 |
| ZnO | 40 | Daudi | Fe6:ZnO | 40 | IST-EBV | -10,75259 | 15,6021 | -0,68918 | 1 | 0 |
| ZnO | 40 | Daudi | Fe6:ZnO | 40 | Daudi | 3,56E-13 | 15,6021 | 2,28E-14 | 1 | 0 |
| ZnO | 40 | Daudi | Fe12:ZnO | 0 | IST-EBV | -100 | 13,51182 | -7,40093 | 7,59E-08 | 1 |
| ZnO | 40 | Daudi | Fe12:ZnO | 0 | Daudi | -100 | 13,51182 | -7,40093 | 7,59E-08 | 1 |
| ZnO | 40 | Daudi | Fe12:ZnO | 10 | IST-EBV | -74,17965 | 14,24271 | -5,20826 | 7,20E-04 | 1 |
| ZnO | 40 | Daudi | Fe12:ZnO | 10 | Daudi | -47,53595 | 14,24271 | -3,33756 | 0,57633 | 0 |
| ZnO | 40 | Daudi | Fe12:ZnO | 20 | IST-EBV | -66,20226 | 14,24271 | -4,64815 | 0,00621 | 1 |
| ZnO | 40 | Daudi | Fe12:ZnO | 20 | Daudi | 3,26E-13 | 14,24271 | 2,29E-14 | 1 | 0 |
| ZnO | 40 | Daudi | Fe12:ZnO | 30 | IST-EBV | -51,1413 | 14,24271 | -3,5907 | 0,25676 | 0 |
| ZnO | 40 | Daudi | Fe12:ZnO | 30 | Daudi | -0,56189 | 14,24271 | -0,03945 | 1 | 0 |
| ZnO | 40 | Daudi | Fe12:ZnO | 40 | IST-EBV | -33,22457 | 14,24271 | -2,33274 | 1 | 0 |
| ZnO | 40 | Daudi | Fe12:ZnO | 40 | Daudi | -0,12433 | 14,24271 | -0,00873 | 1 | 0 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 0 | Daudi | 7,11E-14 | 11,03235 | 6,44E-15 | 1 | 0 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 10 | IST-EBV | 16,6159 | 11,03235 | 1,50611 | 1 | 0 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 10 | Daudi | 76,79787 | 11,03235 | 6,96115 | 5,05E-07 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 20 | IST-EBV | 22,36416 | 11,03235 | 2,02714 | 1 | 0 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 20 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 30 | IST-EBV | 57,67203 | 11,03235 | 5,22754 | 6,67E-04 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 30 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | 89,24741 | 13,51182 | 6,60514 | 2,31E-06 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe6:ZnO | 40 | Daudi | 100 | 13,51182 | 7,40093 | 7,59E-08 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -5,68E-14 | 11,03235 | -5,15E-15 | 1 | 0 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 0 | Daudi | -8,53E-14 | 11,03235 | -7,73E-15 | 1 | 0 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | 25,82035 | 11,9163 | 2,16681 | 1 | 0 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 10 | Daudi | 52,46405 | 11,9163 | 4,40271 | 0,0154 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | 33,79774 | 11,9163 | 2,83626 | 1 | 0 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 20 | Daudi | 100 | 11,9163 | 8,39186 | 1,02E-09 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 48,8587 | 11,9163 | 4,10016 | 0,04557 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 30 | Daudi | 99,43811 | 11,9163 | 8,34471 | 1,26E-09 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 66,77543 | 11,9163 | 5,6037 | 1,48E-04 | 1 |
| Fe6:ZnO | 0 | IST-EBV | Fe12:ZnO | 40 | Daudi | 99,87567 | 11,9163 | 8,38143 | 1,07E-09 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe6:ZnO | 10 | IST-EBV | 16,6159 | 11,03235 | 1,50611 | 1 | 0 |

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|---------|----|---------|----------|----|---------|-----------|----------|-----------|----------|---|
| Fe6:ZnO | 0 | Daudi | Fe6:ZnO | 10 | Daudi | 76,79787 | 11,03235 | 6,96115 | 5,05E-07 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe6:ZnO | 20 | IST-EBV | 22,36416 | 11,03235 | 2,02714 | 1 | 0 |
| Fe6:ZnO | 0 | Daudi | Fe6:ZnO | 20 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe6:ZnO | 30 | IST-EBV | 57,67203 | 11,03235 | 5,22754 | 6,67E-04 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe6:ZnO | 30 | Daudi | 100 | 11,03235 | 9,06425 | 5,47E-11 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe6:ZnO | 40 | IST-EBV | 89,24741 | 13,51182 | 6,60514 | 2,31E-06 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe6:ZnO | 40 | Daudi | 100 | 13,51182 | 7,40093 | 7,59E-08 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 0 | IST-EBV | -1,28E-13 | 11,03235 | -1,16E-14 | 1 | 0 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 0 | Daudi | -1,56E-13 | 11,03235 | -1,42E-14 | 1 | 0 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 10 | IST-EBV | 25,82035 | 11,9163 | 2,16681 | 1 | 0 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 10 | Daudi | 52,46405 | 11,9163 | 4,40271 | 0,0154 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 20 | IST-EBV | 33,79774 | 11,9163 | 2,83626 | 1 | 0 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 20 | Daudi | 100 | 11,9163 | 8,39186 | 1,02E-09 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 30 | IST-EBV | 48,8587 | 11,9163 | 4,10016 | 0,04557 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 30 | Daudi | 99,43811 | 11,9163 | 8,34471 | 1,26E-09 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 40 | IST-EBV | 66,77543 | 11,9163 | 5,6037 | 1,48E-04 | 1 |
| Fe6:ZnO | 0 | Daudi | Fe12:ZnO | 40 | Daudi | 99,87567 | 11,9163 | 8,38143 | 1,07E-09 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe6:ZnO | 10 | Daudi | 60,18197 | 11,03235 | 5,45504 | 2,70E-04 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe6:ZnO | 20 | IST-EBV | 5,74825 | 11,03235 | 0,52104 | 1 | 0 |
| Fe6:ZnO | 10 | IST-EBV | Fe6:ZnO | 20 | Daudi | 83,3841 | 11,03235 | 7,55814 | 3,84E-08 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe6:ZnO | 30 | IST-EBV | 41,05613 | 11,03235 | 3,72143 | 0,16683 | 0 |
| Fe6:ZnO | 10 | IST-EBV | Fe6:ZnO | 30 | Daudi | 83,3841 | 11,03235 | 7,55814 | 3,84E-08 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | 72,6315 | 13,51182 | 5,37541 | 3,71E-04 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe6:ZnO | 40 | Daudi | 83,3841 | 13,51182 | 6,1712 | 1,43E-05 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -16,6159 | 11,03235 | -1,50611 | 1 | 0 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 0 | Daudi | -16,6159 | 11,03235 | -1,50611 | 1 | 0 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | 9,20444 | 11,9163 | 0,77242 | 1 | 0 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 10 | Daudi | 35,84815 | 11,9163 | 3,00833 | 1 | 0 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | 17,18183 | 11,9163 | 1,44188 | 1 | 0 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 20 | Daudi | 83,3841 | 11,9163 | 6,99748 | 4,32E-07 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 32,2428 | 11,9163 | 2,70577 | 1 | 0 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 30 | Daudi | 82,82221 | 11,9163 | 6,95033 | 5,29E-07 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 50,15953 | 11,9163 | 4,20932 | 0,03096 | 1 |
| Fe6:ZnO | 10 | IST-EBV | Fe12:ZnO | 40 | Daudi | 83,25977 | 11,9163 | 6,98705 | 4,52E-07 | 1 |
| Fe6:ZnO | 10 | Daudi | Fe6:ZnO | 20 | IST-EBV | -54,43371 | 11,03235 | -4,93401 | 0,0021 | 1 |
| Fe6:ZnO | 10 | Daudi | Fe6:ZnO | 20 | Daudi | 23,20213 | 11,03235 | 2,1031 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe6:ZnO | 30 | IST-EBV | -19,12584 | 11,03235 | -1,73361 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe6:ZnO | 30 | Daudi | 23,20213 | 11,03235 | 2,1031 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe6:ZnO | 40 | IST-EBV | 12,44954 | 13,51182 | 0,92138 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe6:ZnO | 40 | Daudi | 23,20213 | 13,51182 | 1,71717 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 0 | IST-EBV | -76,79787 | 11,03235 | -6,96115 | 5,05E-07 | 1 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 0 | Daudi | -76,79787 | 11,03235 | -6,96115 | 5,05E-07 | 1 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 10 | IST-EBV | -50,97752 | 11,9163 | -4,27796 | 0,02421 | 1 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 10 | Daudi | -24,33381 | 11,9163 | -2,04206 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 20 | IST-EBV | -43,00013 | 11,9163 | -3,60851 | 0,24224 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 20 | Daudi | 23,20213 | 11,9163 | 1,94709 | 1 | 0 |

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|---------|----|---------|----------|----|---------|-----------|----------|----------|----------|---|
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 30 | IST-EBV | -27,93916 | 11,9163 | -2,34462 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 30 | Daudi | 22,64024 | 11,9163 | 1,89994 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 40 | IST-EBV | -10,02243 | 11,9163 | -0,84107 | 1 | 0 |
| Fe6:ZnO | 10 | Daudi | Fe12:ZnO | 40 | Daudi | 23,0778 | 11,9163 | 1,93666 | 1 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe6:ZnO | 20 | Daudi | 77,63584 | 11,03235 | 7,03711 | 3,65E-07 | 1 |
| Fe6:ZnO | 20 | IST-EBV | Fe6:ZnO | 30 | IST-EBV | 35,30787 | 11,03235 | 3,20039 | 0,87976 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe6:ZnO | 30 | Daudi | 77,63584 | 11,03235 | 7,03711 | 3,65E-07 | 1 |
| Fe6:ZnO | 20 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | 66,88325 | 13,51182 | 4,94998 | 0,00197 | 1 |
| Fe6:ZnO | 20 | IST-EBV | Fe6:ZnO | 40 | Daudi | 77,63584 | 13,51182 | 5,74577 | 8,32E-05 | 1 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -22,36416 | 11,03235 | -2,02714 | 1 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 0 | Daudi | -22,36416 | 11,03235 | -2,02714 | 1 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | 3,45619 | 11,9163 | 0,29004 | 1 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 10 | Daudi | 30,0999 | 11,9163 | 2,52594 | 1 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | 11,43358 | 11,9163 | 0,95949 | 1 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 20 | Daudi | 77,63584 | 11,9163 | 6,51509 | 3,38E-06 | 1 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 26,49455 | 11,9163 | 2,22339 | 1 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 30 | Daudi | 77,07395 | 11,9163 | 6,46794 | 4,13E-06 | 1 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 44,41128 | 11,9163 | 3,72693 | 0,1638 | 0 |
| Fe6:ZnO | 20 | IST-EBV | Fe12:ZnO | 40 | Daudi | 77,51151 | 11,9163 | 6,50466 | 3,53E-06 | 1 |
| Fe6:ZnO | 20 | Daudi | Fe6:ZnO | 30 | IST-EBV | -42,32797 | 11,03235 | -3,83671 | 0,11323 | 0 |
| Fe6:ZnO | 20 | Daudi | Fe6:ZnO | 30 | Daudi | 7,90E-14 | 11,03235 | 7,17E-15 | 1 | 0 |
| Fe6:ZnO | 20 | Daudi | Fe6:ZnO | 40 | IST-EBV | -10,75259 | 13,51182 | -0,79579 | 1 | 0 |
| Fe6:ZnO | 20 | Daudi | Fe6:ZnO | 40 | Daudi | 1,05E-13 | 13,51182 | 7,79E-15 | 1 | 0 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 0 | IST-EBV | -100 | 11,03235 | -9,06425 | 5,47E-11 | 1 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 0 | Daudi | -100 | 11,03235 | -9,06425 | 5,47E-11 | 1 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 10 | IST-EBV | -74,17965 | 11,9163 | -6,22506 | 1,15E-05 | 1 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 10 | Daudi | -47,53595 | 11,9163 | -3,98915 | 0,06714 | 0 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 20 | IST-EBV | -66,20226 | 11,9163 | -5,5556 | 1,80E-04 | 1 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 20 | Daudi | 7,46E-14 | 11,9163 | 6,26E-15 | 1 | 0 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 30 | IST-EBV | -51,1413 | 11,9163 | -4,29171 | 0,02304 | 1 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 30 | Daudi | -0,56189 | 11,9163 | -0,04715 | 1 | 0 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 40 | IST-EBV | -33,22457 | 11,9163 | -2,78816 | 1 | 0 |
| Fe6:ZnO | 20 | Daudi | Fe12:ZnO | 40 | Daudi | -0,12433 | 11,9163 | -0,01043 | 1 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe6:ZnO | 30 | Daudi | 42,32797 | 11,03235 | 3,83671 | 0,11323 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe6:ZnO | 40 | IST-EBV | 31,57538 | 13,51182 | 2,33687 | 1 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe6:ZnO | 40 | Daudi | 42,32797 | 13,51182 | 3,13266 | 1 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -57,67203 | 11,03235 | -5,22754 | 6,67E-04 | 1 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 0 | Daudi | -57,67203 | 11,03235 | -5,22754 | 6,67E-04 | 1 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | -31,85168 | 11,9163 | -2,67295 | 1 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 10 | Daudi | -5,20797 | 11,9163 | -0,43705 | 1 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | -23,87429 | 11,9163 | -2,0035 | 1 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 20 | Daudi | 42,32797 | 11,9163 | 3,55211 | 0,29111 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | -8,81332 | 11,9163 | -0,7396 | 1 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 30 | Daudi | 41,76608 | 11,9163 | 3,50495 | 0,339 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 9,10341 | 11,9163 | 0,76395 | 1 | 0 |
| Fe6:ZnO | 30 | IST-EBV | Fe12:ZnO | 40 | Daudi | 42,20364 | 11,9163 | 3,54167 | 0,30112 | 0 |

| | | | | | | | | | | |
|----------|----|---------|----------|----|---------|-----------|----------|-----------|----------|---|
| Fe6:ZnO | 30 | Daudi | Fe6:ZnO | 40 | IST-EBV | -10,75259 | 13,51182 | -0,79579 | 1 | 0 |
| Fe6:ZnO | 30 | Daudi | Fe6:ZnO | 40 | Daudi | 2,62E-14 | 13,51182 | 1,94E-15 | 1 | 0 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 0 | IST-EBV | -100 | 11,03235 | -9,06425 | 5,47E-11 | 1 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 0 | Daudi | -100 | 11,03235 | -9,06425 | 5,47E-11 | 1 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 10 | IST-EBV | -74,17965 | 11,9163 | -6,22506 | 1,15E-05 | 1 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 10 | Daudi | -47,53595 | 11,9163 | -3,98915 | 0,06714 | 0 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 20 | IST-EBV | -66,20226 | 11,9163 | -5,5556 | 1,80E-04 | 1 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 20 | Daudi | -4,44E-15 | 11,9163 | -3,73E-16 | 1 | 0 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 30 | IST-EBV | -51,1413 | 11,9163 | -4,29171 | 0,02304 | 1 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 30 | Daudi | -0,56189 | 11,9163 | -0,04715 | 1 | 0 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 40 | IST-EBV | -33,22457 | 11,9163 | -2,78816 | 1 | 0 |
| Fe6:ZnO | 30 | Daudi | Fe12:ZnO | 40 | Daudi | -0,12433 | 11,9163 | -0,01043 | 1 | 0 |
| Fe6:ZnO | 40 | IST-EBV | Fe6:ZnO | 40 | Daudi | 10,75259 | 15,6021 | 0,68918 | 1 | 0 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 0 | IST-EBV | -89,24741 | 13,51182 | -6,60514 | 2,31E-06 | 1 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 0 | Daudi | -89,24741 | 13,51182 | -6,60514 | 2,31E-06 | 1 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | -63,42706 | 14,24271 | -4,4533 | 0,0128 | 1 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 10 | Daudi | -36,78335 | 14,24271 | -2,58261 | 1 | 0 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | -55,44967 | 14,24271 | -3,8932 | 0,09342 | 0 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 20 | Daudi | 10,75259 | 14,24271 | 0,75495 | 1 | 0 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | -40,3887 | 14,24271 | -2,83575 | 1 | 0 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 30 | Daudi | 10,1907 | 14,24271 | 0,7155 | 1 | 0 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | -22,47197 | 14,24271 | -1,57779 | 1 | 0 |
| Fe6:ZnO | 40 | IST-EBV | Fe12:ZnO | 40 | Daudi | 10,62826 | 14,24271 | 0,74622 | 1 | 0 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 0 | IST-EBV | -100 | 13,51182 | -7,40093 | 7,59E-08 | 1 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 0 | Daudi | -100 | 13,51182 | -7,40093 | 7,59E-08 | 1 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 10 | IST-EBV | -74,17965 | 14,24271 | -5,20826 | 7,20E-04 | 1 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 10 | Daudi | -47,53595 | 14,24271 | -3,33756 | 0,57633 | 0 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 20 | IST-EBV | -66,20226 | 14,24271 | -4,64815 | 0,00621 | 1 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 20 | Daudi | -3,06E-14 | 14,24271 | -2,15E-15 | 1 | 0 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 30 | IST-EBV | -51,1413 | 14,24271 | -3,5907 | 0,25676 | 0 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 30 | Daudi | -0,56189 | 14,24271 | -0,03945 | 1 | 0 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 40 | IST-EBV | -33,22457 | 14,24271 | -2,33274 | 1 | 0 |
| Fe6:ZnO | 40 | Daudi | Fe12:ZnO | 40 | Daudi | -0,12433 | 14,24271 | -0,00873 | 1 | 0 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 0 | Daudi | -2,84E-14 | 11,03235 | -2,58E-15 | 1 | 0 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 10 | IST-EBV | 25,82035 | 11,9163 | 2,16681 | 1 | 0 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 10 | Daudi | 52,46405 | 11,9163 | 4,40271 | 0,0154 | 1 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | 33,79774 | 11,9163 | 2,83626 | 1 | 0 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 20 | Daudi | 100 | 11,9163 | 8,39186 | 1,02E-09 | 1 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 48,8587 | 11,9163 | 4,10016 | 0,04557 | 1 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 30 | Daudi | 99,43811 | 11,9163 | 8,34471 | 1,26E-09 | 1 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 66,77543 | 11,9163 | 5,6037 | 1,48E-04 | 1 |
| Fe12:ZnO | 0 | IST-EBV | Fe12:ZnO | 40 | Daudi | 99,87567 | 11,9163 | 8,38143 | 1,07E-09 | 1 |
| Fe12:ZnO | 0 | Daudi | Fe12:ZnO | 10 | IST-EBV | 25,82035 | 11,9163 | 2,16681 | 1 | 0 |
| Fe12:ZnO | 0 | Daudi | Fe12:ZnO | 10 | Daudi | 52,46405 | 11,9163 | 4,40271 | 0,0154 | 1 |
| Fe12:ZnO | 0 | Daudi | Fe12:ZnO | 20 | IST-EBV | 33,79774 | 11,9163 | 2,83626 | 1 | 0 |
| Fe12:ZnO | 0 | Daudi | Fe12:ZnO | 20 | Daudi | 100 | 11,9163 | 8,39186 | 1,02E-09 | 1 |

| | | | | | | | | | | |
|----------|----|---------|----------|----|---------|-----------|----------|----------|----------|---|
| Fe12:ZnO | 0 | Daudi | Fe12:ZnO | 30 | IST-EBV | 48,8587 | 11,9163 | 4,10016 | 0,04557 | 1 |
| Fe12:ZnO | 0 | Daudi | Fe12:ZnO | 30 | Daudi | 99,43811 | 11,9163 | 8,34471 | 1,26E-09 | 1 |
| Fe12:ZnO | 0 | Daudi | Fe12:ZnO | 40 | IST-EBV | 66,77543 | 11,9163 | 5,6037 | 1,48E-04 | 1 |
| Fe12:ZnO | 0 | Daudi | Fe12:ZnO | 40 | Daudi | 99,87567 | 11,9163 | 8,38143 | 1,07E-09 | 1 |
| Fe12:ZnO | 10 | IST-EBV | Fe12:ZnO | 10 | Daudi | 26,64371 | 12,73906 | 2,0915 | 1 | 0 |
| Fe12:ZnO | 10 | IST-EBV | Fe12:ZnO | 20 | IST-EBV | 7,97739 | 12,73906 | 0,62621 | 1 | 0 |
| Fe12:ZnO | 10 | IST-EBV | Fe12:ZnO | 20 | Daudi | 74,17965 | 12,73906 | 5,82301 | 6,06E-05 | 1 |
| Fe12:ZnO | 10 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 23,03836 | 12,73906 | 1,80848 | 1 | 0 |
| Fe12:ZnO | 10 | IST-EBV | Fe12:ZnO | 30 | Daudi | 73,61776 | 12,73906 | 5,7789 | 7,26E-05 | 1 |
| Fe12:ZnO | 10 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 40,95509 | 12,73906 | 3,21492 | 0,84165 | 0 |
| Fe12:ZnO | 10 | IST-EBV | Fe12:ZnO | 40 | Daudi | 74,05532 | 12,73906 | 5,81325 | 6,31E-05 | 1 |
| Fe12:ZnO | 10 | Daudi | Fe12:ZnO | 20 | IST-EBV | -18,66632 | 12,73906 | -1,46528 | 1 | 0 |
| Fe12:ZnO | 10 | Daudi | Fe12:ZnO | 20 | Daudi | 47,53595 | 12,73906 | 3,73151 | 0,16132 | 0 |
| Fe12:ZnO | 10 | Daudi | Fe12:ZnO | 30 | IST-EBV | -3,60535 | 12,73906 | -0,28302 | 1 | 0 |
| Fe12:ZnO | 10 | Daudi | Fe12:ZnO | 30 | Daudi | 46,97405 | 12,73906 | 3,6874 | 0,18681 | 0 |
| Fe12:ZnO | 10 | Daudi | Fe12:ZnO | 40 | IST-EBV | 14,31138 | 12,73906 | 1,12342 | 1 | 0 |
| Fe12:ZnO | 10 | Daudi | Fe12:ZnO | 40 | Daudi | 47,41161 | 12,73906 | 3,72175 | 0,16666 | 0 |
| Fe12:ZnO | 20 | IST-EBV | Fe12:ZnO | 20 | Daudi | 66,20226 | 12,73906 | 5,19679 | 7,53E-04 | 1 |
| Fe12:ZnO | 20 | IST-EBV | Fe12:ZnO | 30 | IST-EBV | 15,06097 | 12,73906 | 1,18227 | 1 | 0 |
| Fe12:ZnO | 20 | IST-EBV | Fe12:ZnO | 30 | Daudi | 65,64037 | 12,73906 | 5,15268 | 8,96E-04 | 1 |
| Fe12:ZnO | 20 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 32,9777 | 12,73906 | 2,58871 | 1 | 0 |
| Fe12:ZnO | 20 | IST-EBV | Fe12:ZnO | 40 | Daudi | 66,07793 | 12,73906 | 5,18703 | 7,83E-04 | 1 |
| Fe12:ZnO | 20 | Daudi | Fe12:ZnO | 30 | IST-EBV | -51,1413 | 12,73906 | -4,01453 | 0,06148 | 0 |
| Fe12:ZnO | 20 | Daudi | Fe12:ZnO | 30 | Daudi | -0,56189 | 12,73906 | -0,04411 | 1 | 0 |
| Fe12:ZnO | 20 | Daudi | Fe12:ZnO | 40 | IST-EBV | -33,22457 | 12,73906 | -2,60809 | 1 | 0 |
| Fe12:ZnO | 20 | Daudi | Fe12:ZnO | 40 | Daudi | -0,12433 | 12,73906 | -0,00976 | 1 | 0 |
| Fe12:ZnO | 30 | IST-EBV | Fe12:ZnO | 30 | Daudi | 50,57941 | 12,73906 | 3,97042 | 0,07164 | 0 |
| Fe12:ZnO | 30 | IST-EBV | Fe12:ZnO | 40 | IST-EBV | 17,91673 | 12,73906 | 1,40644 | 1 | 0 |
| Fe12:ZnO | 30 | IST-EBV | Fe12:ZnO | 40 | Daudi | 51,01696 | 12,73906 | 4,00477 | 0,0636 | 0 |
| Fe12:ZnO | 30 | Daudi | Fe12:ZnO | 40 | IST-EBV | -32,66268 | 12,73906 | -2,56398 | 1 | 0 |
| Fe12:ZnO | 30 | Daudi | Fe12:ZnO | 40 | Daudi | 0,43756 | 12,73906 | 0,03435 | 1 | 0 |
| Fe12:ZnO | 40 | IST-EBV | Fe12:ZnO | 40 | Daudi | 33,10023 | 12,73906 | 2,59833 | 1 | 0 |

Three way ANOVA analysis on ZnO and Fe:ZnO NPs uptake experiments on B lymphocytes cell line(Bonferroni t-test).

| Comparison between factor: Nanoparticle | | | | | | |
|---|----------|------------|---------|----------|---------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| ZnO | Fe6:ZnO | -15,94 | 6,68932 | -2,3829 | 0,07633 | 0 |
| ZnO | Fe12:ZnO | -24,33333 | 6,68932 | -3,63764 | 0,00393 | 1 |
| Fe6:ZnO | Fe12:ZnO | -8,39333 | 6,68932 | -1,25474 | 0,66497 | 0 |

| Comparison between factor: Incubation time | | | | | | |
|--|------|------------|--------|---------|----------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| 5 h | 24 h | 24,48667 | 5,4618 | 4,48326 | 0,000155 | 1 |

| Comparison between factor: Dose (µg/mL) | | | | | | |
|---|----|------------|--------|----------|----------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| 10 | 20 | -27,96 | 5,4618 | -5,11919 | 3,07E-05 | 1 |

| All pairwise multiple comparisons | | | | | | | | | | |
|-----------------------------------|------------|--------------|----------|------------|--------------|-----------|----------|----------|----------|-----|
| NP | Incubation | Dose (µg/mL) | NP | Incubation | Dose (µg/mL) | MeanDiff | SEM | t Value | Prob | Sig |
| ZnO | 5h | -- | ZnO | 24h | -- | 20,92667 | 9,46012 | 2,21209 | 0,55091 | 0 |
| ZnO | 5h | -- | Fe6:ZnO | 5h | -- | -22,78333 | 9,46012 | -2,40836 | 0,36098 | 0 |
| ZnO | 5h | -- | Fe6:ZnO | 24h | -- | 11,83 | 9,46012 | 1,25051 | 1 | 0 |
| ZnO | 5h | -- | Fe12:ZnO | 5h | -- | -22,83 | 9,46012 | -2,41329 | 0,3571 | 0 |
| ZnO | 5h | -- | Fe12:ZnO | 24h | -- | -4,91 | 9,46012 | -0,51902 | 1 | 0 |
| ZnO | 24h | -- | Fe6:ZnO | 5h | -- | -43,71 | 9,46012 | -4,62045 | 0,00164 | 1 |
| ZnO | 24h | -- | Fe6:ZnO | 24h | -- | -9,09667 | 9,46012 | -0,96158 | 1 | 0 |
| ZnO | 24h | -- | Fe12:ZnO | 5h | -- | -43,75667 | 9,46012 | -4,62538 | 0,00161 | 1 |
| ZnO | 24h | -- | Fe12:ZnO | 24h | -- | -25,83667 | 9,46012 | -2,73111 | 0,17466 | 0 |
| Fe6:ZnO | 5h | -- | Fe6:ZnO | 24h | -- | 34,61333 | 9,46012 | 3,65887 | 0,01862 | 1 |
| Fe6:ZnO | 5h | -- | Fe12:ZnO | 5h | -- | -0,04667 | 9,46012 | -0,00493 | 1 | 0 |
| Fe6:ZnO | 5h | -- | Fe12:ZnO | 24h | -- | 17,87333 | 9,46012 | 1,88933 | 1 | 0 |
| Fe6:ZnO | 24h | -- | Fe12:ZnO | 5h | -- | -34,66 | 9,46012 | -3,6638 | 0,01839 | 1 |
| Fe6:ZnO | 24h | -- | Fe12:ZnO | 24h | -- | -16,74 | 9,46012 | -1,76953 | 1 | 0 |
| Fe12:ZnO | 5h | -- | Fe12:ZnO | 24h | -- | 17,92 | 9,46012 | 1,89427 | 1 | 0 |
| ZnO | -- | 10 | ZnO | -- | 20 | -23,63 | 9,46012 | -2,49785 | 0,29622 | 0 |
| ZnO | -- | 10 | Fe6:ZnO | -- | 10 | -14,44167 | 9,46012 | -1,52658 | 1 | 0 |
| ZnO | -- | 10 | Fe6:ZnO | -- | 20 | -41,06833 | 9,46012 | -4,34121 | 0,00333 | 1 |
| ZnO | -- | 10 | Fe12:ZnO | -- | 10 | -19,33667 | 9,46012 | -2,04402 | 0,78111 | 0 |
| ZnO | -- | 10 | Fe12:ZnO | -- | 20 | -52,96 | 9,46012 | -5,59824 | 1,38E-04 | 1 |
| ZnO | -- | 20 | Fe6:ZnO | -- | 10 | 9,18833 | 9,46012 | 0,97127 | 1 | 0 |
| ZnO | -- | 20 | Fe6:ZnO | -- | 20 | -17,43833 | 9,46012 | -1,84335 | 1 | 0 |
| ZnO | -- | 20 | Fe12:ZnO | -- | 10 | 4,29333 | 9,46012 | 0,45383 | 1 | 0 |
| ZnO | -- | 20 | Fe12:ZnO | -- | 20 | -29,33 | 9,46012 | -3,10038 | 0,07325 | 0 |
| Fe6:ZnO | -- | 10 | Fe6:ZnO | -- | 20 | -26,62667 | 9,46012 | -2,81462 | 0,14396 | 0 |
| Fe6:ZnO | -- | 10 | Fe12:ZnO | -- | 10 | -4,895 | 9,46012 | -0,51744 | 1 | 0 |
| Fe6:ZnO | -- | 10 | Fe12:ZnO | -- | 20 | -38,51833 | 9,46012 | -4,07165 | 0,00659 | 1 |
| Fe6:ZnO | -- | 20 | Fe12:ZnO | -- | 10 | 21,73167 | 9,46012 | 2,29719 | 0,45951 | 0 |
| Fe6:ZnO | -- | 20 | Fe12:ZnO | -- | 20 | -11,89167 | 9,46012 | -1,25703 | 1 | 0 |
| Fe12:ZnO | -- | 10 | Fe12:ZnO | -- | 20 | -33,62333 | 9,46012 | -3,55422 | 0,02416 | 1 |
| -- | 5h | 10 | -- | 5h | 20 | -22,89 | 7,72416 | -2,96343 | 0,04061 | 1 |
| -- | 5h | 10 | -- | 24h | 10 | 29,55667 | 7,72416 | 3,82652 | 0,0049 | 1 |
| -- | 5h | 10 | -- | 24h | 20 | -3,47333 | 7,72416 | -0,44967 | 1 | 0 |
| -- | 5h | 20 | -- | 24h | 10 | 52,44667 | 7,72416 | 6,78995 | 3,03E-06 | 1 |
| -- | 5h | 20 | -- | 24h | 20 | 19,41667 | 7,72416 | 2,51376 | 0,11436 | 0 |
| -- | 24h | 10 | -- | 24h | 20 | -33,03 | 7,72416 | -4,27619 | 0,00157 | 1 |
| ZnO | 5h | 10 | ZnO | 5h | 20 | -14,77667 | 13,37863 | -1,1045 | 1 | 0 |

| | | | | | | | | | | |
|---------|-----|----|----------|-----|----|-----------|----------|----------|----------|---|
| ZnO | 5h | 10 | ZnO | 24h | 10 | 29,78 | 13,37863 | 2,22594 | 1 | 0 |
| ZnO | 5h | 10 | ZnO | 24h | 20 | -2,70333 | 13,37863 | -0,20206 | 1 | 0 |
| ZnO | 5h | 10 | Fe6:ZnO | 5h | 10 | -19,12 | 13,37863 | -1,42914 | 1 | 0 |
| ZnO | 5h | 10 | Fe6:ZnO | 5h | 20 | -41,22333 | 13,37863 | -3,08128 | 0,33738 | 0 |
| ZnO | 5h | 10 | Fe6:ZnO | 24h | 10 | 20,01667 | 13,37863 | 1,49617 | 1 | 0 |
| ZnO | 5h | 10 | Fe6:ZnO | 24h | 20 | -11,13333 | 13,37863 | -0,83217 | 1 | 0 |
| ZnO | 5h | 10 | Fe12:ZnO | 5h | 10 | -14,32333 | 13,37863 | -1,07061 | 1 | 0 |
| ZnO | 5h | 10 | Fe12:ZnO | 5h | 20 | -46,11333 | 13,37863 | -3,44679 | 0,13867 | 0 |
| ZnO | 5h | 10 | Fe12:ZnO | 24h | 10 | 5,43 | 13,37863 | 0,40587 | 1 | 0 |
| ZnO | 5h | 10 | Fe12:ZnO | 24h | 20 | -30,02667 | 13,37863 | -2,24437 | 1 | 0 |
| ZnO | 5h | 20 | ZnO | 24h | 10 | 44,55667 | 13,37863 | 3,33043 | 0,18454 | 0 |
| ZnO | 5h | 20 | ZnO | 24h | 20 | 12,07333 | 13,37863 | 0,90243 | 1 | 0 |
| ZnO | 5h | 20 | Fe6:ZnO | 5h | 10 | -4,34333 | 13,37863 | -0,32465 | 1 | 0 |
| ZnO | 5h | 20 | Fe6:ZnO | 5h | 20 | -26,44667 | 13,37863 | -1,97678 | 1 | 0 |
| ZnO | 5h | 20 | Fe6:ZnO | 24h | 10 | 34,79333 | 13,37863 | 2,60066 | 1 | 0 |
| ZnO | 5h | 20 | Fe6:ZnO | 24h | 20 | 3,64333 | 13,37863 | 0,27232 | 1 | 0 |
| ZnO | 5h | 20 | Fe12:ZnO | 5h | 10 | 0,45333 | 13,37863 | 0,03388 | 1 | 0 |
| ZnO | 5h | 20 | Fe12:ZnO | 5h | 20 | -31,33667 | 13,37863 | -2,34229 | 1 | 0 |
| ZnO | 5h | 20 | Fe12:ZnO | 24h | 10 | 20,20667 | 13,37863 | 1,51037 | 1 | 0 |
| ZnO | 5h | 20 | Fe12:ZnO | 24h | 20 | -15,25 | 13,37863 | -1,13988 | 1 | 0 |
| ZnO | 24h | 10 | ZnO | 24h | 20 | -32,48333 | 13,37863 | -2,428 | 1 | 0 |
| ZnO | 24h | 10 | Fe6:ZnO | 5h | 10 | -48,9 | 13,37863 | -3,65508 | 0,08272 | 0 |
| ZnO | 24h | 10 | Fe6:ZnO | 5h | 20 | -71,00333 | 13,37863 | -5,30722 | 0,00126 | 1 |
| ZnO | 24h | 10 | Fe6:ZnO | 24h | 10 | -9,76333 | 13,37863 | -0,72977 | 1 | 0 |
| ZnO | 24h | 10 | Fe6:ZnO | 24h | 20 | -40,91333 | 13,37863 | -3,05811 | 0,35661 | 0 |
| ZnO | 24h | 10 | Fe12:ZnO | 5h | 10 | -44,10333 | 13,37863 | -3,29655 | 0,20047 | 0 |
| ZnO | 24h | 10 | Fe12:ZnO | 5h | 20 | -75,89333 | 13,37863 | -5,67273 | 5,05E-04 | 1 |
| ZnO | 24h | 10 | Fe12:ZnO | 24h | 10 | -24,35 | 13,37863 | -1,82007 | 1 | 0 |
| ZnO | 24h | 10 | Fe12:ZnO | 24h | 20 | -59,80667 | 13,37863 | -4,47031 | 0,01054 | 1 |
| ZnO | 24h | 20 | Fe6:ZnO | 5h | 10 | -16,41667 | 13,37863 | -1,22708 | 1 | 0 |
| ZnO | 24h | 20 | Fe6:ZnO | 5h | 20 | -38,52 | 13,37863 | -2,87922 | 0,54471 | 0 |
| ZnO | 24h | 20 | Fe6:ZnO | 24h | 10 | 22,72 | 13,37863 | 1,69823 | 1 | 0 |
| ZnO | 24h | 20 | Fe6:ZnO | 24h | 20 | -8,43 | 13,37863 | -0,63011 | 1 | 0 |
| ZnO | 24h | 20 | Fe12:ZnO | 5h | 10 | -11,62 | 13,37863 | -0,86855 | 1 | 0 |
| ZnO | 24h | 20 | Fe12:ZnO | 5h | 20 | -43,41 | 13,37863 | -3,24473 | 0,22743 | 0 |
| ZnO | 24h | 20 | Fe12:ZnO | 24h | 10 | 8,13333 | 13,37863 | 0,60793 | 1 | 0 |
| ZnO | 24h | 20 | Fe12:ZnO | 24h | 20 | -27,32333 | 13,37863 | -2,04231 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe6:ZnO | 5h | 20 | -22,10333 | 13,37863 | -1,65214 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe6:ZnO | 24h | 10 | 39,13667 | 13,37863 | 2,92531 | 0,48877 | 0 |
| Fe6:ZnO | 5h | 10 | Fe6:ZnO | 24h | 20 | 7,98667 | 13,37863 | 0,59697 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe12:ZnO | 5h | 10 | 4,79667 | 13,37863 | 0,35853 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe12:ZnO | 5h | 20 | -26,99333 | 13,37863 | -2,01765 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe12:ZnO | 24h | 10 | 24,55 | 13,37863 | 1,83502 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe12:ZnO | 24h | 20 | -10,90667 | 13,37863 | -0,81523 | 1 | 0 |
| Fe6:ZnO | 5h | 20 | Fe6:ZnO | 24h | 10 | 61,24 | 13,37863 | 4,57745 | 0,00803 | 1 |
| Fe6:ZnO | 5h | 20 | Fe6:ZnO | 24h | 20 | 30,09 | 13,37863 | 2,24911 | 1 | 0 |

| | | | | | | | | | | |
|----------|-----|----|----------|-----|----|-----------|----------|----------|---------|---|
| Fe6:ZnO | 5h | 20 | Fe12:ZnO | 5h | 10 | 26,9 | 13,37863 | 2,01067 | 1 | 0 |
| Fe6:ZnO | 5h | 20 | Fe12:ZnO | 5h | 20 | -4,89 | 13,37863 | -0,36551 | 1 | 0 |
| Fe6:ZnO | 5h | 20 | Fe12:ZnO | 24h | 10 | 46,65333 | 13,37863 | 3,48715 | 0,12552 | 0 |
| Fe6:ZnO | 5h | 20 | Fe12:ZnO | 24h | 20 | 11,19667 | 13,37863 | 0,83691 | 1 | 0 |
| Fe6:ZnO | 24h | 10 | Fe6:ZnO | 24h | 20 | -31,15 | 13,37863 | -2,32834 | 1 | 0 |
| Fe6:ZnO | 24h | 10 | Fe12:ZnO | 5h | 10 | -34,34 | 13,37863 | -2,56678 | 1 | 0 |
| Fe6:ZnO | 24h | 10 | Fe12:ZnO | 5h | 20 | -66,13 | 13,37863 | -4,94296 | 0,00317 | 1 |
| Fe6:ZnO | 24h | 10 | Fe12:ZnO | 24h | 10 | -14,58667 | 13,37863 | -1,0903 | 1 | 0 |
| Fe6:ZnO | 24h | 10 | Fe12:ZnO | 24h | 20 | -50,04333 | 13,37863 | -3,74054 | 0,06681 | 0 |
| Fe6:ZnO | 24h | 20 | Fe12:ZnO | 5h | 10 | -3,19 | 13,37863 | -0,23844 | 1 | 0 |
| Fe6:ZnO | 24h | 20 | Fe12:ZnO | 5h | 20 | -34,98 | 13,37863 | -2,61462 | 1 | 0 |
| Fe6:ZnO | 24h | 20 | Fe12:ZnO | 24h | 10 | 16,56333 | 13,37863 | 1,23804 | 1 | 0 |
| Fe6:ZnO | 24h | 20 | Fe12:ZnO | 24h | 20 | -18,89333 | 13,37863 | -1,4122 | 1 | 0 |
| Fe12:ZnO | 5h | 10 | Fe12:ZnO | 5h | 20 | -31,79 | 13,37863 | -2,37618 | 1 | 0 |
| Fe12:ZnO | 5h | 10 | Fe12:ZnO | 24h | 10 | 19,75333 | 13,37863 | 1,47648 | 1 | 0 |
| Fe12:ZnO | 5h | 10 | Fe12:ZnO | 24h | 20 | -15,70333 | 13,37863 | -1,17376 | 1 | 0 |
| Fe12:ZnO | 5h | 20 | Fe12:ZnO | 24h | 10 | 51,54333 | 13,37863 | 3,85266 | 0,05042 | 0 |
| Fe12:ZnO | 5h | 20 | Fe12:ZnO | 24h | 20 | 16,08667 | 13,37863 | 1,20241 | 1 | 0 |
| Fe12:ZnO | 24h | 10 | Fe12:ZnO | 24h | 20 | -35,45667 | 13,37863 | -2,65025 | 0,92482 | 0 |

Three way ANOVA analysis on ZnO and Fe:ZnO NPs uptake experiments on Daudi cell line(Bonferroni t-test).

| Comparison between factor: Nanoparticle | | | | | | |
|---|----------|------------|---------|----------|---------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| ZnO | Fe6:ZnO | -11,90667 | 4,73687 | -2,51361 | 0,05931 | 0 |
| ZnO | Fe12:ZnO | -7,07958 | 5,02421 | -1,40909 | 0,51836 | 0 |
| Fe6:ZnO | Fe12:ZnO | 4,82708 | 5,02421 | 0,96076 | 1 | 0 |

| Comparison between factor: Incubation time | | | | | | |
|--|------|------------|---------|----------|----------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| 5 h | 24 h | 52,14972 | 4,02557 | 12,95462 | 9,02E-12 | 1 |

| Comparison between factor: Dose (µg/mL) | | | | | | |
|---|----|------------|---------|----------|---------|-----|
| | | Mean Diff. | SEM | t Value | Prob | Sig |
| 10 | 20 | -6,63083 | 4,02557 | -1,64718 | 0,11373 | 0 |

| All pairwise multiple comparisons | | | | | | | | | | |
|-----------------------------------|------------|--------------|----------|------------|--------------|-----------|---------|----------|----------|-----|
| NP | Incubation | Dose (µg/mL) | NP | Incubation | Dose (µg/mL) | MeanDiff | SEM | t Value | Prob | Sig |
| ZnO | 5h | -- | ZnO | 24h | -- | 41,205 | 6,69895 | 6,15096 | 5,15E-05 | 1 |
| ZnO | 5h | -- | Fe6:ZnO | 5h | -- | -23,68667 | 6,69895 | -3,53588 | 0,02786 | 1 |
| ZnO | 5h | -- | Fe6:ZnO | 24h | -- | 41,07833 | 6,69895 | 6,13205 | 5,38E-05 | 1 |
| ZnO | 5h | -- | Fe12:ZnO | 5h | -- | -11,71667 | 6,69895 | -1,74903 | 1 | 0 |
| ZnO | 5h | -- | Fe12:ZnO | 24h | -- | 38,7625 | 7,48966 | 5,17547 | 5,17E-04 | 1 |

| | | | | | | | | | | |
|----------|-----|----|----------|-----|----|-----------|----------|----------|----------|---|
| ZnO | 24h | -- | Fe6:ZnO | 5h | -- | -64,89167 | 6,69895 | -9,68684 | 3,22E-08 | 1 |
| ZnO | 24h | -- | Fe6:ZnO | 24h | -- | -0,12667 | 6,69895 | -0,01891 | 1 | 0 |
| ZnO | 24h | -- | Fe12:ZnO | 5h | -- | -52,92167 | 6,69895 | -7,89999 | 1,09E-06 | 1 |
| ZnO | 24h | -- | Fe12:ZnO | 24h | -- | -2,4425 | 7,48966 | -0,32612 | 1 | 0 |
| Fe6:ZnO | 5h | -- | Fe6:ZnO | 24h | -- | 64,765 | 6,69895 | 9,66793 | 3,34E-08 | 1 |
| Fe6:ZnO | 5h | -- | Fe12:ZnO | 5h | -- | 11,97 | 6,69895 | 1,78685 | 1 | 0 |
| Fe6:ZnO | 5h | -- | Fe12:ZnO | 24h | -- | 62,44917 | 7,48966 | 8,33805 | 4,42E-07 | 1 |
| Fe6:ZnO | 24h | -- | Fe12:ZnO | 5h | -- | -52,795 | 6,69895 | -7,88108 | 1,13E-06 | 1 |
| Fe6:ZnO | 24h | -- | Fe12:ZnO | 24h | -- | -2,31583 | 7,48966 | -0,3092 | 1 | 0 |
| Fe12:ZnO | 5h | -- | Fe12:ZnO | 24h | -- | 50,47917 | 7,48966 | 6,73985 | 1,35E-05 | 1 |
| ZnO | -- | 10 | ZnO | -- | 20 | -8,715 | 6,69895 | -1,30095 | 1 | 0 |
| ZnO | -- | 10 | Fe6:ZnO | -- | 10 | -12,42833 | 6,69895 | -1,85527 | 1 | 0 |
| ZnO | -- | 10 | Fe6:ZnO | -- | 20 | -20,1 | 6,69895 | -3,00047 | 0,09881 | 0 |
| ZnO | -- | 10 | Fe12:ZnO | -- | 10 | -9,68417 | 7,10531 | -1,36295 | 1 | 0 |
| ZnO | -- | 10 | Fe12:ZnO | -- | 20 | -13,19 | 7,10531 | -1,85636 | 1,00E+00 | 0 |
| ZnO | -- | 20 | Fe6:ZnO | -- | 10 | -3,71333 | 6,69895 | -0,55432 | 1 | 0 |
| ZnO | -- | 20 | Fe6:ZnO | -- | 20 | -11,385 | 6,69895 | -1,69952 | 1 | 0 |
| ZnO | -- | 20 | Fe12:ZnO | -- | 10 | -0,96917 | 7,10531 | -0,1364 | 1 | 0 |
| ZnO | -- | 20 | Fe12:ZnO | -- | 20 | -4,475 | 7,10531 | -0,62981 | 1 | 0 |
| Fe6:ZnO | -- | 10 | Fe6:ZnO | -- | 20 | -7,67167 | 6,69895 | -1,1452 | 1 | 0 |
| Fe6:ZnO | -- | 10 | Fe12:ZnO | -- | 10 | 2,74417 | 7,10531 | 0,38621 | 1 | 0 |
| Fe6:ZnO | -- | 10 | Fe12:ZnO | -- | 20 | -0,76167 | 7,10531 | -0,1072 | 1 | 0 |
| Fe6:ZnO | -- | 20 | Fe12:ZnO | -- | 10 | 10,41583 | 7,10531 | 1,46592 | 1 | 0 |
| Fe6:ZnO | -- | 20 | Fe12:ZnO | -- | 20 | 6,91 | 7,10531 | 0,97251 | 1 | 0 |
| Fe12:ZnO | -- | 10 | Fe12:ZnO | -- | 20 | -3,50583 | 7,48966 | -0,46809 | 1 | 0 |
| -- | 5h | 10 | -- | 5h | 20 | -28,47444 | 5,46967 | -5,20588 | 1,92E-04 | 1 |
| -- | 5h | 10 | -- | 24h | 10 | 30,30611 | 5,69301 | 5,32339 | 1,45E-04 | 1 |
| -- | 5h | 10 | -- | 24h | 20 | 45,51889 | 5,69301 | 7,99557 | 3,57E-07 | 1 |
| -- | 5h | 20 | -- | 24h | 10 | 58,78056 | 5,69301 | 10,32503 | 4,03E-09 | 1 |
| -- | 5h | 20 | -- | 24h | 20 | 73,99333 | 5,69301 | 12,99721 | 5,07E-11 | 1 |
| -- | 24h | 10 | -- | 24h | 20 | 15,21278 | 5,90792 | 2,57498 | 0,10365 | 0 |
| ZnO | 5h | 10 | ZnO | 5h | 20 | -30,93 | 9,47375 | -3,26481 | 0,23402 | 0 |
| ZnO | 5h | 10 | ZnO | 24h | 10 | 18,99 | 9,47375 | 2,00449 | 1 | 0 |
| ZnO | 5h | 10 | ZnO | 24h | 20 | 32,49 | 9,47375 | 3,42948 | 0,15817 | 0 |
| ZnO | 5h | 10 | Fe6:ZnO | 5h | 10 | -24,60333 | 9,47375 | -2,597 | 1 | 0 |
| ZnO | 5h | 10 | Fe6:ZnO | 5h | 20 | -53,7 | 9,47375 | -5,66829 | 7,01E-04 | 1 |
| ZnO | 5h | 10 | Fe6:ZnO | 24h | 10 | 18,73667 | 9,47375 | 1,97775 | 1 | 0 |
| ZnO | 5h | 10 | Fe6:ZnO | 24h | 20 | 32,49 | 9,47375 | 3,42948 | 0,15817 | 0 |
| ZnO | 5h | 10 | Fe12:ZnO | 5h | 10 | -14,48333 | 9,47375 | -1,52879 | 1 | 0 |
| ZnO | 5h | 10 | Fe12:ZnO | 5h | 20 | -39,88 | 9,47375 | -4,20953 | 0,02387 | 1 |
| ZnO | 5h | 10 | Fe12:ZnO | 24h | 10 | 14,105 | 10,59197 | 1,33167 | 1 | 0 |
| ZnO | 5h | 10 | Fe12:ZnO | 24h | 20 | 32,49 | 10,59197 | 3,06742 | 0,37211 | 0 |
| ZnO | 5h | 20 | ZnO | 24h | 10 | 49,92 | 9,47375 | 5,2693 | 0,00182 | 1 |
| ZnO | 5h | 20 | ZnO | 24h | 20 | 63,42 | 9,47375 | 6,69429 | 6,56E-05 | 1 |
| ZnO | 5h | 20 | Fe6:ZnO | 5h | 10 | 6,32667 | 9,47375 | 0,66781 | 1 | 0 |
| ZnO | 5h | 20 | Fe6:ZnO | 5h | 20 | -22,77 | 9,47375 | -2,40348 | 1 | 0 |

| | | | | | | | | | | |
|----------|-----|----|----------|-----|----|-----------|----------|-----------|----------|---|
| ZnO | 5h | 20 | Fe6:ZnO | 24h | 10 | 49,66667 | 9,47375 | 5,24256 | 0,00194 | 1 |
| ZnO | 5h | 20 | Fe6:ZnO | 24h | 20 | 63,42 | 9,47375 | 6,69429 | 6,56E-05 | 1 |
| ZnO | 5h | 20 | Fe12:ZnO | 5h | 10 | 16,44667 | 9,47375 | 1,73603 | 1 | 0 |
| ZnO | 5h | 20 | Fe12:ZnO | 5h | 20 | -8,95 | 9,47375 | -0,94472 | 1 | 0 |
| ZnO | 5h | 20 | Fe12:ZnO | 24h | 10 | 45,035 | 10,59197 | 4,2518 | 0,02153 | 1 |
| ZnO | 5h | 20 | Fe12:ZnO | 24h | 20 | 63,42 | 10,59197 | 5,98755 | 3,31E-04 | 1 |
| ZnO | 24h | 10 | ZnO | 24h | 20 | 13,5 | 9,47375 | 1,42499 | 1 | 0 |
| ZnO | 24h | 10 | Fe6:ZnO | 5h | 10 | -43,59333 | 9,47375 | -4,60149 | 0,00916 | 1 |
| ZnO | 24h | 10 | Fe6:ZnO | 5h | 20 | -72,69 | 9,47375 | -7,67278 | 7,74E-06 | 1 |
| ZnO | 24h | 10 | Fe6:ZnO | 24h | 10 | -0,25333 | 9,47375 | -0,02674 | 1 | 0 |
| ZnO | 24h | 10 | Fe6:ZnO | 24h | 20 | 13,5 | 9,47375 | 1,42499 | 1 | 0 |
| ZnO | 24h | 10 | Fe12:ZnO | 5h | 10 | -33,47333 | 9,47375 | -3,53327 | 0,12333 | 0 |
| ZnO | 24h | 10 | Fe12:ZnO | 5h | 20 | -58,87 | 9,47375 | -6,21401 | 1,96E-04 | 1 |
| ZnO | 24h | 10 | Fe12:ZnO | 24h | 10 | -4,885 | 10,59197 | -0,4612 | 1 | 0 |
| ZnO | 24h | 10 | Fe12:ZnO | 24h | 20 | 13,5 | 10,59197 | 1,27455 | 1 | 0 |
| ZnO | 24h | 20 | Fe6:ZnO | 5h | 10 | -57,09333 | 9,47375 | -6,02648 | 3,02E-04 | 1 |
| ZnO | 24h | 20 | Fe6:ZnO | 5h | 20 | -86,19 | 9,47375 | -9,09777 | 4,32E-07 | 1 |
| ZnO | 24h | 20 | Fe6:ZnO | 24h | 10 | -13,75333 | 9,47375 | -1,45173 | 1 | 0 |
| ZnO | 24h | 20 | Fe6:ZnO | 24h | 20 | 1,82E-14 | 9,47375 | 1,92E-15 | 1 | 0 |
| ZnO | 24h | 20 | Fe12:ZnO | 5h | 10 | -46,97333 | 9,47375 | -4,95826 | 0,00385 | 1 |
| ZnO | 24h | 20 | Fe12:ZnO | 5h | 20 | -72,37 | 9,47375 | -7,639 | 8,31E-06 | 1 |
| ZnO | 24h | 20 | Fe12:ZnO | 24h | 10 | -18,385 | 10,59197 | -1,73575 | 1 | 0 |
| ZnO | 24h | 20 | Fe12:ZnO | 24h | 20 | 4,00E-15 | 10,59197 | 3,77E-16 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe6:ZnO | 5h | 20 | -29,09667 | 9,47375 | -3,07129 | 0,36876 | 0 |
| Fe6:ZnO | 5h | 10 | Fe6:ZnO | 24h | 10 | 43,34 | 9,47375 | 4,57475 | 0,00978 | 1 |
| Fe6:ZnO | 5h | 10 | Fe6:ZnO | 24h | 20 | 57,09333 | 9,47375 | 6,02648 | 3,02E-04 | 1 |
| Fe6:ZnO | 5h | 10 | Fe12:ZnO | 5h | 10 | 10,12 | 9,47375 | 1,06821 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe12:ZnO | 5h | 20 | -15,27667 | 9,47375 | -1,61253 | 1 | 0 |
| Fe6:ZnO | 5h | 10 | Fe12:ZnO | 24h | 10 | 38,70833 | 10,59197 | 3,6545 | 0,0921 | 0 |
| Fe6:ZnO | 5h | 10 | Fe12:ZnO | 24h | 20 | 57,09333 | 10,59197 | 5,39024 | 0,00136 | 1 |
| Fe6:ZnO | 5h | 20 | Fe6:ZnO | 24h | 10 | 72,43667 | 9,47375 | 7,64604 | 8,19E-06 | 1 |
| Fe6:ZnO | 5h | 20 | Fe6:ZnO | 24h | 20 | 86,19 | 9,47375 | 9,09777 | 4,32E-07 | 1 |
| Fe6:ZnO | 5h | 20 | Fe12:ZnO | 5h | 10 | 39,21667 | 9,47375 | 4,13951 | 0,02832 | 1 |
| Fe6:ZnO | 5h | 20 | Fe12:ZnO | 5h | 20 | 13,82 | 9,47375 | 1,45877 | 1 | 0 |
| Fe6:ZnO | 5h | 20 | Fe12:ZnO | 24h | 10 | 67,805 | 10,59197 | 6,40155 | 1,27E-04 | 1 |
| Fe6:ZnO | 5h | 20 | Fe12:ZnO | 24h | 20 | 86,19 | 10,59197 | 8,13729 | 2,93E-06 | 1 |
| Fe6:ZnO | 24h | 10 | Fe6:ZnO | 24h | 20 | 13,75333 | 9,47375 | 1,45173 | 1 | 0 |
| Fe6:ZnO | 24h | 10 | Fe12:ZnO | 5h | 10 | -33,22 | 9,47375 | -3,50653 | 0,13151 | 0 |
| Fe6:ZnO | 24h | 10 | Fe12:ZnO | 5h | 20 | -58,61667 | 9,47375 | -6,18727 | 2,08E-04 | 1 |
| Fe6:ZnO | 24h | 10 | Fe12:ZnO | 24h | 10 | -4,63167 | 10,59197 | -0,43728 | 1 | 0 |
| Fe6:ZnO | 24h | 10 | Fe12:ZnO | 24h | 20 | 13,75333 | 10,59197 | 1,29847 | 1 | 0 |
| Fe6:ZnO | 24h | 20 | Fe12:ZnO | 5h | 10 | -46,97333 | 9,47375 | -4,95826 | 0,00385 | 1 |
| Fe6:ZnO | 24h | 20 | Fe12:ZnO | 5h | 20 | -72,37 | 9,47375 | -7,639 | 8,31E-06 | 1 |
| Fe6:ZnO | 24h | 20 | Fe12:ZnO | 24h | 10 | -18,385 | 10,59197 | -1,73575 | 1 | 0 |
| Fe6:ZnO | 24h | 20 | Fe12:ZnO | 24h | 20 | -1,42E-14 | 10,59197 | -1,34E-15 | 1 | 0 |
| Fe12:ZnO | 5h | 10 | Fe12:ZnO | 5h | 20 | -25,39667 | 9,47375 | -2,68074 | 0,90126 | 0 |

| | | | | | | | | | | |
|----------|-----|----|----------|-----|----|----------|----------|---------|----------|---|
| Fe12:ZnO | 5h | 10 | Fe12:ZnO | 24h | 10 | 28,58833 | 10,59197 | 2,69906 | 0,86502 | 0 |
| Fe12:ZnO | 5h | 10 | Fe12:ZnO | 24h | 20 | 46,97333 | 10,59197 | 4,4348 | 0,01377 | 1 |
| Fe12:ZnO | 5h | 20 | Fe12:ZnO | 24h | 10 | 53,985 | 10,59197 | 5,09678 | 0,00275 | 1 |
| Fe12:ZnO | 5h | 20 | Fe12:ZnO | 24h | 20 | 72,37 | 10,59197 | 6,83253 | 4,81E-05 | 1 |
| Fe12:ZnO | 24h | 10 | Fe12:ZnO | 24h | 20 | 18,385 | 11,60293 | 1,58451 | 1 | 0 |

Two Ways ANOVA on ZnO and Fe-ZnO cytotoxicity on BxPC-3 cell line (Bonferroni t-test).

| Comparison between factor: Nanoparticle | | | | | | |
|---|---------|------------|---------|----------|---------|--------------|
| NP 1 vs. NP 2 | | Mean Diff. | SEM | t Value | P | Sig (P<0.05) |
| Fe6:ZnO | ZnO | -9,66832 | 8,16696 | -1,18383 | 0,72499 | 0 |
| Fe12:ZnO | ZnO | -17,05455 | 8,16696 | -2,08824 | 0,12452 | 0 |
| Fe12:ZnO | Fe6:ZnO | -7,38623 | 8,16696 | -0,9044 | 1 | 0 |

| Comparison between parameter: Dose (µg/mL) | | | | | | |
|--|----------|-----------|----------|----------|------------|--------------|
| Dose 1 vs. Dose 2 | | MeanDiff | SEM | t Value | P | Sig (P<0.05) |
| 10 µg/ml | 0 µg/ml | -2,6289 | 10,11297 | -0,25995 | 1 | 0 |
| 20 µg/ml | 0 µg/ml | -4,95878 | 10,11297 | -0,49034 | 1 | 0 |
| 20 µg/ml | 10 µg/ml | -2,32988 | 10,11297 | -0,23039 | 1 | 0 |
| 30 µg/ml | 0 µg/ml | -61,65259 | 10,11297 | -6,09639 | 1,19424E-6 | 1 |
| 30 µg/ml | 10 µg/ml | -59,02369 | 10,11297 | -5,83643 | 3,11541E-6 | 1 |
| 30 µg/ml | 20 µg/ml | -56,69381 | 10,11297 | -5,60605 | 7,24222E-6 | 1 |
| 40 µg/ml | 0 µg/ml | -87,03963 | 11,67746 | -7,45365 | 7,55617E-9 | 1 |
| 40 µg/ml | 10 µg/ml | -84,41072 | 11,67746 | -7,22852 | 1,75286E-8 | 1 |
| 40 µg/ml | 20 µg/ml | -82,08085 | 11,67746 | -7,029 | 3,6966E-8 | 1 |
| 40 µg/ml | 30 µg/ml | -25,38704 | 11,67746 | -2,17402 | 0,34106 | 0 |

| All pairwise multiple comparisons | | | | | | | | |
|-----------------------------------|--------------|------|--------------|----------|----------|----------|---------|--------------|
| NP 1 | Dose (µg/mL) | NP 2 | Dose (µg/mL) | MeanDiff | SEM | t Value | P | Sig (P<0.05) |
| ZnO | 10 µg/ml | ZnO | 0 µg/ml | -0,60141 | 17,51618 | -0,03433 | 1 | 0 |
| ZnO | 20 µg/ml | ZnO | 0 µg/ml | 4,48506 | 17,51618 | 0,25605 | 1 | 0 |
| ZnO | 20 µg/ml | ZnO | 10 µg/ml | 5,08647 | 17,51618 | 0,29039 | 1 | 0 |
| ZnO | 30 µg/ml | ZnO | 0 µg/ml | -41,4049 | 17,51618 | -2,36381 | 1 | 0 |
| ZnO | 30 µg/ml | ZnO | 10 µg/ml | -40,8035 | 17,51618 | -2,32947 | 1 | 0 |
| ZnO | 30 µg/ml | ZnO | 20 µg/ml | -45,89 | 17,51618 | -2,61986 | 1 | 0 |
| ZnO | 40 µg/ml | ZnO | 0 µg/ml | -71,6129 | 20,22595 | -3,54064 | 0,08724 | 0 |
| ZnO | 40 µg/ml | ZnO | 10 µg/ml | -71,0115 | 20,22595 | -3,51091 | 0,09556 | 0 |

| | | | | | | | | |
|----------|----------|---------|----------|----------|----------|----------|---------|---|
| ZnO | 40 µg/ml | ZnO | 20 µg/ml | -76,0979 | 20,22595 | -3,76239 | 0,0437 | 1 |
| ZnO | 40 µg/ml | ZnO | 30 µg/ml | -30,208 | 20,22595 | -1,49353 | 1 | 0 |
| Fe6:ZnO | 0 µg/ml | ZnO | 0 µg/ml | 0 | 17,51618 | 0 | 1 | 0 |
| Fe6:ZnO | 0 µg/ml | ZnO | 10 µg/ml | 0,60141 | 17,51618 | 0,03433 | 1 | 0 |
| Fe6:ZnO | 0 µg/ml | ZnO | 20 µg/ml | -4,48506 | 17,51618 | -0,25605 | 1 | 0 |
| Fe6:ZnO | 0 µg/ml | ZnO | 30 µg/ml | 41,40491 | 17,51618 | 2,36381 | 1 | 0 |
| Fe6:ZnO | 0 µg/ml | ZnO | 40 µg/ml | 71,61287 | 20,22595 | 3,54064 | 0,08724 | 0 |
| Fe6:ZnO | 10 µg/ml | ZnO | 0 µg/ml | -12,9214 | 17,51618 | -0,73768 | 1 | 0 |
| Fe6:ZnO | 10 µg/ml | ZnO | 10 µg/ml | -12,32 | 17,51618 | -0,70335 | 1 | 0 |
| Fe6:ZnO | 10 µg/ml | ZnO | 20 µg/ml | -17,4065 | 17,51618 | -0,99374 | 1 | 0 |
| Fe6:ZnO | 10 µg/ml | ZnO | 30 µg/ml | 28,4835 | 17,51618 | 1,62612 | 1 | 0 |
| Fe6:ZnO | 10 µg/ml | ZnO | 40 µg/ml | 58,69146 | 20,22595 | 2,90179 | 0,5628 | 0 |
| Fe6:ZnO | 10 µg/ml | Fe6:ZnO | 0 µg/ml | -12,9214 | 17,51618 | -0,73768 | 1 | 0 |
| Fe6:ZnO | 20 µg/ml | ZnO | 0 µg/ml | -2,0716 | 17,51618 | -0,11827 | 1 | 0 |
| Fe6:ZnO | 20 µg/ml | ZnO | 10 µg/ml | -1,47019 | 17,51618 | -0,08393 | 1 | 0 |
| Fe6:ZnO | 20 µg/ml | ZnO | 20 µg/ml | -6,55666 | 17,51618 | -0,37432 | 1 | 0 |
| Fe6:ZnO | 20 µg/ml | ZnO | 30 µg/ml | 39,33332 | 17,51618 | 2,24554 | 1 | 0 |
| Fe6:ZnO | 20 µg/ml | ZnO | 40 µg/ml | 69,54128 | 20,22595 | 3,43822 | 0,11919 | 0 |
| Fe6:ZnO | 20 µg/ml | Fe6:ZnO | 0 µg/ml | -2,0716 | 17,51618 | -0,11827 | 1 | 0 |
| Fe6:ZnO | 20 µg/ml | Fe6:ZnO | 10 µg/ml | 10,84981 | 17,51618 | 0,61942 | 1 | 0 |
| Fe6:ZnO | 30 µg/ml | ZnO | 0 µg/ml | -54,3589 | 17,51618 | -3,10335 | 0,3195 | 0 |
| Fe6:ZnO | 30 µg/ml | ZnO | 10 µg/ml | -53,7575 | 17,51618 | -3,06902 | 0,35238 | 0 |
| Fe6:ZnO | 30 µg/ml | ZnO | 20 µg/ml | -58,8439 | 17,51618 | -3,3594 | 0,15106 | 0 |
| Fe6:ZnO | 30 µg/ml | ZnO | 30 µg/ml | -12,954 | 17,51618 | -0,73954 | 1 | 0 |
| Fe6:ZnO | 30 µg/ml | ZnO | 40 µg/ml | 17,25401 | 20,22595 | 0,85306 | 1 | 0 |
| Fe6:ZnO | 30 µg/ml | Fe6:ZnO | 0 µg/ml | -54,3589 | 17,51618 | -3,10335 | 0,3195 | 0 |
| Fe6:ZnO | 30 µg/ml | Fe6:ZnO | 10 µg/ml | -41,4375 | 17,51618 | -2,36567 | 1 | 0 |
| Fe6:ZnO | 30 µg/ml | Fe6:ZnO | 20 µg/ml | -52,2873 | 17,51618 | -2,98508 | 0,44656 | 0 |
| Fe6:ZnO | 40 µg/ml | ZnO | 0 µg/ml | -92,6856 | 20,22595 | -4,58251 | 0,00289 | 1 |
| Fe6:ZnO | 40 µg/ml | ZnO | 10 µg/ml | -92,0842 | 20,22595 | -4,55278 | 0,0032 | 1 |
| Fe6:ZnO | 40 µg/ml | ZnO | 20 µg/ml | -97,1707 | 20,22595 | -4,80426 | 0,00134 | 1 |
| Fe6:ZnO | 40 µg/ml | ZnO | 30 µg/ml | -51,2807 | 20,22595 | -2,53539 | 1 | 0 |
| Fe6:ZnO | 40 µg/ml | ZnO | 40 µg/ml | -21,0728 | 22,6133 | -0,93188 | 1 | 0 |
| Fe6:ZnO | 40 µg/ml | Fe6:ZnO | 0 µg/ml | -92,6856 | 20,22595 | -4,58251 | 0,00289 | 1 |
| Fe6:ZnO | 40 µg/ml | Fe6:ZnO | 10 µg/ml | -79,7642 | 20,22595 | -3,94366 | 0,02447 | 1 |
| Fe6:ZnO | 40 µg/ml | Fe6:ZnO | 20 µg/ml | -90,614 | 20,22595 | -4,48009 | 0,00411 | 1 |
| Fe6:ZnO | 40 µg/ml | Fe6:ZnO | 30 µg/ml | -38,3268 | 20,22595 | -1,89493 | 1 | 0 |
| Fe12:ZnO | 0 µg/ml | ZnO | 0 µg/ml | 0 | 17,51618 | 0 | 1 | 0 |

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|---|
| Fe12:ZnO | 0 µg/ml | ZnO | 10 µg/ml | 0,60141 | 17,51618 | 0,03433 | 1 | 0 |
| Fe12:ZnO | 0 µg/ml | ZnO | 20 µg/ml | -4,48506 | 17,51618 | -0,25605 | 1 | 0 |
| Fe12:ZnO | 0 µg/ml | ZnO | 30 µg/ml | 41,40491 | 17,51618 | 2,36381 | 1 | 0 |
| Fe12:ZnO | 0 µg/ml | ZnO | 40 µg/ml | 71,61287 | 20,22595 | 3,54064 | 0,08724 | 0 |
| Fe12:ZnO | 0 µg/ml | Fe6:ZnO | 0 µg/ml | 0 | 17,51618 | 0 | 1 | 0 |
| Fe12:ZnO | 0 µg/ml | Fe6:ZnO | 10 µg/ml | 12,92141 | 17,51618 | 0,73768 | 1 | 0 |
| Fe12:ZnO | 0 µg/ml | Fe6:ZnO | 20 µg/ml | 2,0716 | 17,51618 | 0,11827 | 1 | 0 |
| Fe12:ZnO | 0 µg/ml | Fe6:ZnO | 30 µg/ml | 54,35886 | 17,51618 | 3,10335 | 0,3195 | 0 |
| Fe12:ZnO | 0 µg/ml | Fe6:ZnO | 40 µg/ml | 92,68564 | 20,22595 | 4,58251 | 0,00289 | 1 |
| Fe12:ZnO | 10 µg/ml | ZnO | 0 µg/ml | 5,63611 | 17,51618 | 0,32177 | 1 | 0 |
| Fe12:ZnO | 10 µg/ml | ZnO | 10 µg/ml | 6,23752 | 17,51618 | 0,3561 | 1 | 0 |
| Fe12:ZnO | 10 µg/ml | ZnO | 20 µg/ml | 1,15105 | 17,51618 | 0,06571 | 1 | 0 |
| Fe12:ZnO | 10 µg/ml | ZnO | 30 µg/ml | 47,04103 | 17,51618 | 2,68557 | 1 | 0 |
| Fe12:ZnO | 10 µg/ml | ZnO | 40 µg/ml | 77,24899 | 20,22595 | 3,8193 | 0,03648 | 1 |
| Fe12:ZnO | 10 µg/ml | Fe6:ZnO | 0 µg/ml | 5,63611 | 17,51618 | 0,32177 | 1 | 0 |
| Fe12:ZnO | 10 µg/ml | Fe6:ZnO | 10 µg/ml | 18,55752 | 17,51618 | 1,05945 | 1 | 0 |
| Fe12:ZnO | 10 µg/ml | Fe6:ZnO | 20 µg/ml | 7,70771 | 17,51618 | 0,44003 | 1 | 0 |
| Fe12:ZnO | 10 µg/ml | Fe6:ZnO | 30 µg/ml | 59,99498 | 17,51618 | 3,42512 | 0,12401 | 0 |
| Fe12:ZnO | 10 µg/ml | Fe6:ZnO | 40 µg/ml | 98,32175 | 20,22595 | 4,86117 | 0,0011 | 1 |
| Fe12:ZnO | 10 µg/ml | Fe12:ZnO | 0 µg/ml | 5,63611 | 17,51618 | 0,32177 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | ZnO | 0 µg/ml | -17,2898 | 17,51618 | -0,98708 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | ZnO | 10 µg/ml | -16,6884 | 17,51618 | -0,95274 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | ZnO | 20 µg/ml | -21,7749 | 17,51618 | -1,24313 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | ZnO | 30 µg/ml | 24,1151 | 17,51618 | 1,37673 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | ZnO | 40 µg/ml | 54,32306 | 20,22595 | 2,68581 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | Fe6:ZnO | 0 µg/ml | -17,2898 | 17,51618 | -0,98708 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | Fe6:ZnO | 10 µg/ml | -4,3684 | 17,51618 | -0,24939 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | Fe6:ZnO | 20 µg/ml | -15,2182 | 17,51618 | -0,86881 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | Fe6:ZnO | 30 µg/ml | 37,06906 | 17,51618 | 2,11627 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | Fe6:ZnO | 40 µg/ml | 75,39583 | 20,22595 | 3,72768 | 0,04876 | 1 |
| Fe12:ZnO | 20 µg/ml | Fe12:ZnO | 0 µg/ml | -17,2898 | 17,51618 | -0,98708 | 1 | 0 |
| Fe12:ZnO | 20 µg/ml | Fe12:ZnO | 10 µg/ml | -22,9259 | 17,51618 | -1,30884 | 1 | 0 |
| Fe12:ZnO | 30 µg/ml | ZnO | 0 µg/ml | -89,194 | 17,51618 | -5,09209 | 4,85E-04 | 1 |
| Fe12:ZnO | 30 µg/ml | ZnO | 10 µg/ml | -88,5926 | 17,51618 | -5,05776 | 5,48E-04 | 1 |
| Fe12:ZnO | 30 µg/ml | ZnO | 20 µg/ml | -93,6791 | 17,51618 | -5,34814 | 1,94E-04 | 1 |
| Fe12:ZnO | 30 µg/ml | ZnO | 30 µg/ml | -47,7891 | 17,51618 | -2,72828 | 0,90017 | 0 |
| Fe12:ZnO | 30 µg/ml | ZnO | 40 µg/ml | -17,5811 | 20,22595 | -0,86924 | 1 | 0 |
| Fe12:ZnO | 30 µg/ml | Fe6:ZnO | 0 µg/ml | -89,194 | 17,51618 | -5,09209 | 4,85E-04 | 1 |

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|---|
| Fe12:ZnO | 30 µg/ml | Fe6:ZnO | 10 µg/ml | -76,2726 | 17,51618 | -4,35441 | 0,00629 | 1 |
| Fe12:ZnO | 30 µg/ml | Fe6:ZnO | 20 µg/ml | -87,1224 | 17,51618 | -4,97382 | 7,38E-04 | 1 |
| Fe12:ZnO | 30 µg/ml | Fe6:ZnO | 30 µg/ml | -34,8351 | 17,51618 | -1,98874 | 1 | 0 |
| Fe12:ZnO | 30 µg/ml | Fe6:ZnO | 40 µg/ml | 3,49165 | 20,22595 | 0,17263 | 1 | 0 |
| Fe12:ZnO | 30 µg/ml | Fe12:ZnO | 0 µg/ml | -89,194 | 17,51618 | -5,09209 | 4,85E-04 | 1 |
| Fe12:ZnO | 30 µg/ml | Fe12:ZnO | 10 µg/ml | -94,8301 | 17,51618 | -5,41386 | 1,53E-04 | 1 |
| Fe12:ZnO | 30 µg/ml | Fe12:ZnO | 20 µg/ml | -71,9042 | 17,51618 | -4,10501 | 0,01445 | 1 |
| Fe12:ZnO | 40 µg/ml | ZnO | 0 µg/ml | -96,8204 | 20,22595 | -4,78694 | 0,00142 | 1 |
| Fe12:ZnO | 40 µg/ml | ZnO | 10 µg/ml | -96,219 | 20,22595 | -4,7572 | 0,00158 | 1 |
| Fe12:ZnO | 40 µg/ml | ZnO | 20 µg/ml | -101,305 | 20,22595 | -5,00869 | 6,53E-04 | 1 |
| Fe12:ZnO | 40 µg/ml | ZnO | 30 µg/ml | -55,4155 | 20,22595 | -2,73982 | 0,87295 | 0 |
| Fe12:ZnO | 40 µg/ml | ZnO | 40 µg/ml | -25,2075 | 22,6133 | -1,11472 | 1 | 0 |
| Fe12:ZnO | 40 µg/ml | Fe6:ZnO | 0 µg/ml | -96,8204 | 20,22595 | -4,78694 | 0,00142 | 1 |
| Fe12:ZnO | 40 µg/ml | Fe6:ZnO | 10 µg/ml | -83,899 | 20,22595 | -4,14809 | 0,01254 | 1 |
| Fe12:ZnO | 40 µg/ml | Fe6:ZnO | 20 µg/ml | -94,7488 | 20,22595 | -4,68452 | 0,00203 | 1 |
| Fe12:ZnO | 40 µg/ml | Fe6:ZnO | 30 µg/ml | -42,4615 | 20,22595 | -2,09936 | 1 | 0 |
| Fe12:ZnO | 40 µg/ml | Fe6:ZnO | 40 µg/ml | -4,13473 | 22,6133 | -0,18285 | 1 | 0 |
| Fe12:ZnO | 40 µg/ml | Fe12:ZnO | 0 µg/ml | -96,8204 | 20,22595 | -4,78694 | 0,00142 | 1 |
| Fe12:ZnO | 40 µg/ml | Fe12:ZnO | 10 µg/ml | -102,456 | 20,22595 | -5,0656 | 5,33E-04 | 1 |
| Fe12:ZnO | 40 µg/ml | Fe12:ZnO | 20 µg/ml | -79,5306 | 20,22595 | -3,93211 | 0,0254 | 1 |
| Fe12:ZnO | 40 µg/ml | Fe12:ZnO | 30 µg/ml | -7,62638 | 20,22595 | -0,37706 | 1 | 0 |

Three way ANOVA analysis on ZnO and Fe:ZnO NPs uptake experiments on BxPC-3 cell line (Bonferroni t-test).

| NP | | | | | | |
|--------------|----------|----------|---------|----------|----------|--------------|
| NP 1 vs NP 2 | | MeanDiff | SEM | t Value | P | Sig (P<0,05) |
| ZnO | Fe6:ZnO | -46,3283 | 2,47491 | -18,7192 | 2,4E-15 | 1 |
| ZnO | Fe12:ZnO | -27,8242 | 2,47491 | -11,2425 | 1,43E-10 | 1 |
| Fe6:ZnO | Fe12:ZnO | 18,50417 | 2,47491 | 7,47669 | 3,07E-07 | 1 |

| Incubation time | | | | | | |
|-----------------|------|----------|---------|----------|----------|--------------|
| | | MeanDiff | SEM | t Value | P | Sig (P<0,05) |
| 5 h | 24 h | -10,7078 | 2,02076 | -5,29889 | 1,95E-05 | 1 |

| Dose (µg/mL) | | | | | | |
|--------------|----------|----------|---------|----------|----------|--------------|
| | | MeanDiff | SEM | t Value | P | Sig (P<0,05) |
| 10 µg/ml | 20 µg/ml | -29,12 | 2,02076 | -14,4104 | 2,59E-13 | 1 |

| All pairwise multiple comparisons | | | | | | | | | | |
|-----------------------------------|------------|--------------|----------|------------|--------------|----------|---------|----------|----------|--------------|
| NP | Incubation | Dose (µg/mL) | NP | Incubation | Dose (µg/mL) | MeanDiff | SEM | t Value | P | Sig (P<0,05) |
| ZnO | 5 h | -- | ZnO | 24 h | -- | -10,725 | 3,50006 | -3,06424 | 0,07987 | 0 |
| ZnO | 5 h | -- | Fe6:ZnO | 5 h | -- | -42,4667 | 3,50006 | -12,1331 | 1,49E-10 | 1 |
| ZnO | 5 h | -- | Fe6:ZnO | 24 h | -- | -60,915 | 3,50006 | -17,404 | 6,14E-14 | 1 |
| ZnO | 5 h | -- | Fe12:ZnO | 5 h | -- | -31,7117 | 3,50006 | -9,06033 | 4,88E-08 | 1 |
| ZnO | 5 h | -- | Fe12:ZnO | 24 h | -- | -34,6617 | 3,50006 | -9,90317 | 8,91E-09 | 1 |
| ZnO | 24 h | -- | Fe6:ZnO | 5 h | -- | -31,7417 | 3,50006 | -9,0689 | 4,80E-08 | 1 |
| ZnO | 24 h | -- | Fe6:ZnO | 24 h | -- | -50,19 | 3,50006 | -14,3398 | 4,32E-12 | 1 |
| ZnO | 24 h | -- | Fe12:ZnO | 5 h | -- | -20,9867 | 3,50006 | -5,99609 | 5,16E-05 | 1 |
| ZnO | 24 h | -- | Fe12:ZnO | 24 h | -- | -23,9367 | 3,50006 | -6,83893 | 6,75E-06 | 1 |
| Fe6:ZnO | 5 h | -- | Fe6:ZnO | 24 h | -- | -18,4483 | 3,50006 | -5,27087 | 3,14E-04 | 1 |
| Fe6:ZnO | 5 h | -- | Fe12:ZnO | 5 h | -- | 10,755 | 3,50006 | 3,07281 | 0,07825 | 0 |
| Fe6:ZnO | 5 h | -- | Fe12:ZnO | 24 h | -- | 7,805 | 3,50006 | 2,22996 | 0,53045 | 0 |
| Fe6:ZnO | 24 h | -- | Fe12:ZnO | 5 h | -- | 29,20333 | 3,50006 | 8,34367 | 2,23E-07 | 1 |
| Fe6:ZnO | 24 h | -- | Fe12:ZnO | 24 h | -- | 26,25333 | 3,50006 | 7,50083 | 1,45E-06 | 1 |
| Fe12:ZnO | 5 h | -- | Fe12:ZnO | 24 h | -- | -2,95 | 3,50006 | -0,84284 | 1 | 0 |
| ZnO | -- | 10 µg/ml | ZnO | -- | 20 µg/ml | -28,5883 | 3,50006 | -8,16796 | 3,27E-07 | 1 |
| ZnO | -- | 10 µg/ml | Fe6:ZnO | -- | 10 µg/ml | -47,02 | 3,50006 | -13,4341 | 1,75E-11 | 1 |
| ZnO | -- | 10 µg/ml | Fe6:ZnO | -- | 20 µg/ml | -74,225 | 3,50006 | -21,2068 | 7,08E-16 | 1 |
| ZnO | -- | 10 µg/ml | Fe12:ZnO | -- | 10 µg/ml | -26,335 | 3,50006 | -7,52416 | 1,38E-06 | 1 |
| ZnO | -- | 10 µg/ml | Fe12:ZnO | -- | 20 µg/ml | -57,9017 | 3,50006 | -16,5431 | 1,90E-13 | 1 |
| ZnO | -- | 20 µg/ml | Fe6:ZnO | -- | 10 µg/ml | -18,4317 | 3,50006 | -5,2661 | 3,18E-04 | 1 |
| ZnO | -- | 20 µg/ml | Fe6:ZnO | -- | 20 µg/ml | -45,6367 | 3,50006 | -13,0388 | 3,30E-11 | 1 |
| ZnO | -- | 20 µg/ml | Fe12:ZnO | -- | 10 µg/ml | 2,25333 | 3,50006 | 0,6438 | 1 | 0 |
| ZnO | -- | 20 µg/ml | Fe12:ZnO | -- | 20 µg/ml | -29,3133 | 3,50006 | -8,3751 | 2,08E-07 | 1 |
| Fe6:ZnO | -- | 10 µg/ml | Fe6:ZnO | -- | 20 µg/ml | -27,205 | 3,50006 | -7,77273 | 7,85E-07 | 1 |
| Fe6:ZnO | -- | 10 µg/ml | Fe12:ZnO | -- | 10 µg/ml | 20,685 | 3,50006 | 5,9099 | 6,38E-05 | 1 |

| | | | | | | | | | | |
|----------|------|----------|----------|------|----------|----------|---------|----------|----------|---|
| Fe6:ZnO | -- | 10 µg/ml | Fe12:ZnO | -- | 20 µg/ml | -10,8817 | 3,50006 | -3,109 | 0,07175 | 0 |
| Fe6:ZnO | -- | 20 µg/ml | Fe12:ZnO | -- | 10 µg/ml | 47,89 | 3,50006 | 13,68263 | 1,18E-11 | 1 |
| Fe6:ZnO | -- | 20 µg/ml | Fe12:ZnO | -- | 20 µg/ml | 16,32333 | 3,50006 | 4,66373 | 0,00146 | 1 |
| Fe12:ZnO | -- | 10 µg/ml | Fe12:ZnO | -- | 20 µg/ml | -31,5667 | 3,50006 | -9,0189 | 5,32E-08 | 1 |
| -- | 5 h | 10 µg/ml | -- | 5 h | 20 µg/ml | -28,2189 | 2,85779 | -9,87439 | 3,77E-09 | 1 |
| -- | 5 h | 10 µg/ml | -- | 24 h | 10 µg/ml | -9,80667 | 2,85779 | -3,43156 | 0,01309 | 1 |
| -- | 5 h | 10 µg/ml | -- | 24 h | 20 µg/ml | -39,8278 | 2,85779 | -13,9366 | 3,19E-12 | 1 |
| -- | 5 h | 20 µg/ml | -- | 24 h | 10 µg/ml | 18,41222 | 2,85779 | 6,44283 | 6,95E-06 | 1 |
| -- | 5 h | 20 µg/ml | -- | 24 h | 20 µg/ml | -11,6089 | 2,85779 | -4,0622 | 0,0027 | 1 |
| -- | 24 h | 10 µg/ml | -- | 24 h | 20 µg/ml | -30,0211 | 2,85779 | -10,505 | 1,12E-09 | 1 |
| ZnO | 5 h | 10 µg/ml | ZnO | 5 h | 20 µg/ml | -25,2667 | 4,94983 | -5,10455 | 0,00211 | 1 |
| ZnO | 5 h | 10 µg/ml | ZnO | 24 h | 10 µg/ml | -7,40333 | 4,94983 | -1,49567 | 1 | 0 |
| ZnO | 5 h | 10 µg/ml | ZnO | 24 h | 20 µg/ml | -39,3133 | 4,94983 | -7,94236 | 2,37E-06 | 1 |
| ZnO | 5 h | 10 µg/ml | Fe6:ZnO | 5 h | 10 µg/ml | -40,1367 | 4,94983 | -8,1087 | 1,64E-06 | 1 |
| ZnO | 5 h | 10 µg/ml | Fe6:ZnO | 5 h | 20 µg/ml | -70,0633 | 4,94983 | -14,1547 | 2,52E-11 | 1 |
| ZnO | 5 h | 10 µg/ml | Fe6:ZnO | 24 h | 10 µg/ml | -61,3067 | 4,94983 | -12,3856 | 4,27E-10 | 1 |
| ZnO | 5 h | 10 µg/ml | Fe6:ZnO | 24 h | 20 µg/ml | -85,79 | 4,94983 | -17,3319 | 2,96E-13 | 1 |
| ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 5 h | 10 µg/ml | -29,6133 | 4,94983 | -5,9827 | 2,35E-04 | 1 |
| ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | -59,0767 | 4,94983 | -11,9351 | 9,23E-10 | 1 |
| ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | -30,46 | 4,94983 | -6,15375 | 1,54E-04 | 1 |
| ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -64,13 | 4,94983 | -12,956 | 1,66E-10 | 1 |
| ZnO | 5 h | 20 µg/ml | ZnO | 24 h | 10 µg/ml | 17,86333 | 4,94983 | 3,60888 | 0,09281 | 0 |
| ZnO | 5 h | 20 µg/ml | ZnO | 24 h | 20 µg/ml | -14,0467 | 4,94983 | -2,83781 | 0,60011 | 0 |
| ZnO | 5 h | 20 µg/ml | Fe6:ZnO | 5 h | 10 µg/ml | -14,87 | 4,94983 | -3,00414 | 0,40556 | 0 |
| ZnO | 5 h | 20 µg/ml | Fe6:ZnO | 5 h | 20 µg/ml | -44,7967 | 4,94983 | -9,05014 | 2,19E-07 | 1 |
| ZnO | 5 h | 20 µg/ml | Fe6:ZnO | 24 h | 10 µg/ml | -36,04 | 4,94983 | -7,28106 | 1,06E-05 | 1 |
| ZnO | 5 h | 20 µg/ml | Fe6:ZnO | 24 h | 20 µg/ml | -60,5233 | 4,94983 | -12,2274 | 5,59E-10 | 1 |
| ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 5 h | 10 µg/ml | -4,34667 | 4,94983 | -0,87814 | 1 | 0 |
| ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | -33,81 | 4,94983 | -6,83054 | 3,03E-05 | 1 |
| ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | -5,19333 | 4,94983 | -1,04919 | 1 | 0 |
| ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -38,8633 | 4,94983 | -7,85145 | 2,90E-06 | 1 |
| ZnO | 24 h | 10 µg/ml | ZnO | 24 h | 20 µg/ml | -31,91 | 4,94983 | -6,44669 | 7,58E-05 | 1 |
| ZnO | 24 h | 10 µg/ml | Fe6:ZnO | 5 h | 10 µg/ml | -32,7333 | 4,94983 | -6,61302 | 5,08E-05 | 1 |
| ZnO | 24 h | 10 µg/ml | Fe6:ZnO | 5 h | 20 µg/ml | -62,66 | 4,94983 | -12,659 | 2,71E-10 | 1 |
| ZnO | 24 h | 10 µg/ml | Fe6:ZnO | 24 h | 10 µg/ml | -53,9033 | 4,94983 | -10,8899 | 5,98E-09 | 1 |
| ZnO | 24 h | 10 µg/ml | Fe6:ZnO | 24 h | 20 µg/ml | -78,3867 | 4,94983 | -15,8362 | 2,19E-12 | 1 |
| ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 5 h | 10 µg/ml | -22,21 | 4,94983 | -4,48702 | 0,0101 | 1 |
| ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | -51,6733 | 4,94983 | -10,4394 | 1,39E-08 | 1 |
| ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | -23,0567 | 4,94983 | -4,65807 | 0,00654 | 1 |
| ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -56,7267 | 4,94983 | -11,4603 | 2,13E-09 | 1 |
| ZnO | 24 h | 20 µg/ml | Fe6:ZnO | 5 h | 10 µg/ml | -0,82333 | 4,94983 | -0,16634 | 1 | 0 |
| ZnO | 24 h | 20 µg/ml | Fe6:ZnO | 5 h | 20 µg/ml | -30,75 | 4,94983 | -6,21234 | 1,34E-04 | 1 |
| ZnO | 24 h | 20 µg/ml | Fe6:ZnO | 24 h | 10 µg/ml | -21,9933 | 4,94983 | -4,44325 | 0,01129 | 1 |
| ZnO | 24 h | 20 µg/ml | Fe6:ZnO | 24 h | 20 µg/ml | -46,4767 | 4,94983 | -9,38955 | 1,09E-07 | 1 |
| ZnO | 24 h | 20 µg/ml | Fe12:ZnO | 5 h | 10 µg/ml | 9,7 | 4,94983 | 1,95966 | 1 | 0 |
| ZnO | 24 h | 20 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | -19,7633 | 4,94983 | -3,99273 | 0,03542 | 1 |

| | | | | | | | | | | |
|----------|------|----------|----------|------|----------|----------|---------|----------|----------|---|
| ZnO | 24 h | 20 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | 8,85333 | 4,94983 | 1,78861 | 1 | 0 |
| ZnO | 24 h | 20 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -24,8167 | 4,94983 | -5,01364 | 0,00265 | 1 |
| Fe6:ZnO | 5 h | 10 µg/ml | Fe6:ZnO | 5 h | 20 µg/ml | -29,9267 | 4,94983 | -6,046 | 2,01E-04 | 1 |
| Fe6:ZnO | 5 h | 10 µg/ml | Fe6:ZnO | 24 h | 10 µg/ml | -21,17 | 4,94983 | -4,27692 | 0,01724 | 1 |
| Fe6:ZnO | 5 h | 10 µg/ml | Fe6:ZnO | 24 h | 20 µg/ml | -45,6533 | 4,94983 | -9,22321 | 1,54E-07 | 1 |
| Fe6:ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 5 h | 10 µg/ml | 10,52333 | 4,94983 | 2,126 | 1 | 0 |
| Fe6:ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | -18,94 | 4,94983 | -3,82639 | 0,05386 | 0 |
| Fe6:ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | 9,67667 | 4,94983 | 1,95495 | 1 | 0 |
| Fe6:ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -23,9933 | 4,94983 | -4,84731 | 0,00404 | 1 |
| Fe6:ZnO | 5 h | 20 µg/ml | Fe6:ZnO | 24 h | 10 µg/ml | 8,75667 | 4,94983 | 1,76908 | 1 | 0 |
| Fe6:ZnO | 5 h | 20 µg/ml | Fe6:ZnO | 24 h | 20 µg/ml | -15,7267 | 4,94983 | -3,17721 | 0,26785 | 0 |
| Fe6:ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 5 h | 10 µg/ml | 40,45 | 4,94983 | 8,172 | 1,43E-06 | 1 |
| Fe6:ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | 10,98667 | 4,94983 | 2,21961 | 1 | 0 |
| Fe6:ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | 39,60333 | 4,94983 | 8,00095 | 2,08E-06 | 1 |
| Fe6:ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | 5,93333 | 4,94983 | 1,19869 | 1 | 0 |
| Fe6:ZnO | 24 h | 10 µg/ml | Fe6:ZnO | 24 h | 20 µg/ml | -24,4833 | 4,94983 | -4,9463 | 0,00314 | 1 |
| Fe6:ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 5 h | 10 µg/ml | 31,69333 | 4,94983 | 6,40291 | 8,42E-05 | 1 |
| Fe6:ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | 2,23 | 4,94983 | 0,45052 | 1 | 0 |
| Fe6:ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | 30,84667 | 4,94983 | 6,23186 | 1,28E-04 | 1 |
| Fe6:ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -2,82333 | 4,94983 | -0,57039 | 1 | 0 |
| Fe6:ZnO | 24 h | 20 µg/ml | Fe12:ZnO | 5 h | 10 µg/ml | 56,17667 | 4,94983 | 11,34921 | 2,59E-09 | 1 |
| Fe6:ZnO | 24 h | 20 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | 26,71333 | 4,94983 | 5,39682 | 0,00101 | 1 |
| Fe6:ZnO | 24 h | 20 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | 55,33 | 4,94983 | 11,17816 | 3,53E-09 | 1 |
| Fe6:ZnO | 24 h | 20 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | 21,66 | 4,94983 | 4,37591 | 0,0134 | 1 |
| Fe12:ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 5 h | 20 µg/ml | -29,4633 | 4,94983 | -5,95239 | 2,53E-04 | 1 |
| Fe12:ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | -0,84667 | 4,94983 | -0,17105 | 1 | 0 |
| Fe12:ZnO | 5 h | 10 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -34,5167 | 4,94983 | -6,9733 | 2,16E-05 | 1 |
| Fe12:ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 24 h | 10 µg/ml | 28,61667 | 4,94983 | 5,78134 | 3,86E-04 | 1 |
| Fe12:ZnO | 5 h | 20 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -5,05333 | 4,94983 | -1,02091 | 1 | 0 |
| Fe12:ZnO | 24 h | 10 µg/ml | Fe12:ZnO | 24 h | 20 µg/ml | -33,67 | 4,94983 | -6,80225 | 3,24E-05 | 1 |