**Table S1.** The entire datasets of the removal efficiency of cVMSs, predictions from the present ANN model, and the regression analysis and J Tang equation model.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.No | CD (mA/cm2) | IpH | PD (mm) | UVI (W) | RT (min) | cVMSs (%) | Regression analysis | J Tang model | Present Work |
| 1 | 12 | 7 | 24 | 60 | 65 | 49.6 | 48.47 | 40.4105 | 49.797 |
| 2 | 8.6 | 7.8 | 12.6 | 85 | 80 | 52.5 | 52.94 | 13.224392 | 52.938 |
| 3 | 12 | 7 | 16 | 60 | 65 | 50.3 | 50.1 | 28.8393 | 50.241 |
| 4 | 8.6 | 6.2 | 12.6 | 35 | 80 | 47.7 | 47.66 | 46.96076 | 47.521 |
| 5 | 15.4 | 6.2 | 19.4 | 35 | 80 | 58.6 | 58.57 | 55.432472 | 58.657 |
| 6 | 12 | 7 | 8 | 60 | 65 | 49.2 | 47.94 | 13.5561 | 49.444 |
| 7 | 8.6 | 7.8 | 12.6 | 35 | 50 | 31.8 | 32.25 | 27.002592 | 31.77 |
| 8 | 8.6 | 6.2 | 12.6 | 35 | 50 | 31.1 | 32.03 | 26.97296 | 31.519 |
| 9 | 8.6 | 7.8 | 19.4 | 85 | 50 | 34.5 | 35.01 | -3.475856 | 34.434 |
| 10 | 8.6 | 6.2 | 12.6 | 85 | 50 | 34.9 | 35.18 | -8.59704 | 34.651 |
| 11 | 12 | 5 | 16 | 60 | 65 | 49.3 | 48.09 | 27.1027 | 49.133 |
| 12 | 15.4 | 7.8 | 12.6 | 35 | 50 | 35.4 | 36.01 | 18.553184 | 35.116 |
| 13 | 12 | 7 | 16 | 60 | 65 | 50.3 | 50.1 | 28.8393 | 50.241 |
| 14 | 4 | 7 | 16 | 60 | 65 | 36.2 | 35.01 | 32.2649 | 36.237 |
| 15 | 15.4 | 7.8 | 12.6 | 85 | 80 | 63.8 | 63.65 | 4.774984 | 63.168 |
| 16 | 8.6 | 6.2 | 19.4 | 85 | 50 | 34.2 | 34.92 | -3.390416 | 33.756 |
| 17 | 20 | 7 | 16 | 60 | 65 | 53.1 | 51.89 | 12.1017 | 52.887 |
| 18 | 12 | 7 | 16 | 60 | 100 | 60.3 | 60.83 | 44.3128 | 60.471 |
| 19 | 8.6 | 6.2 | 19.4 | 85 | 80 | 52.6 | 52.97 | 26.367784 | 52.682 |
| 20 | 12 | 7 | 16 | 60 | 65 | 50.3 | 50.1 | 28.8393 | 50.241 |
| 21 | 15.4 | 7.8 | 12.6 | 85 | 50 | 38.2 | 38.75 | -17.192 | 38.037 |
| 22 | 8.6 | 7.8 | 19.4 | 35 | 80 | 48 | 48.19 | 64.092344 | 47.88 |
| 23 | 12 | 7 | 16 | 60 | 65 | 50.3 | 50.1 | 28.8393 | 50.241 |
| 24 | 15.4 | 6.2 | 12.6 | 35 | 80 | 57.4 | 57.92 | 37.873784 | 58.023 |
| 25 | 12 | 7 | 16 | 0 | 65 | 44.8 | 43.37 | 52.0593 | 44.62 |
| 26 | 8.6 | 6.2 | 19.4 | 35 | 50 | 30.9 | 31.98 | 36.463584 | 31.236 |
| 27 | 15.4 | 6.2 | 19.4 | 35 | 50 | 35.1 | 35.47 | 27.774272 | 34.985 |
| 28 | 8.6 | 7.8 | 12.6 | 35 | 80 | 47.4 | 47.86 | 46.870392 | 47.542 |
| 29 | 15.4 | 7.8 | 19.4 | 85 | 50 | 38.2 | 38.94 | -11.5276 | 38.363 |
| 30 | 8.6 | 7.8 | 19.4 | 85 | 80 | 53.2 | 53.05 | 26.162344 | 53.085 |
| 31 | 15.4 | 6.2 | 12.6 | 85 | 80 | 62.8 | 62.97 | 4.403784 | 62.486 |
| 32 | 8.6 | 6.2 | 12.6 | 85 | 80 | 53 | 52.92 | 13.49076 | 52.654 |
| 33 | 12 | 7 | 16 | 60 | 65 | 50.3 | 50.1 | 28.8393 | 50.241 |
| 34 | 15.4 | 7.8 | 19.4 | 85 | 80 | 64 | 64.14 | 18.1106 | 63.433 |
| 35 | 12 | 7 | 16 | 60 | 30 | 15.2 | 12.27 | -13.5842 | 15.276 |
| 36 | 12 | 7 | 16 | 60 | 65 | 50.3 | 50.1 | 28.8393 | 50.241 |
| 37 | 12 | 7 | 16 | 120 | 65 | 53.6 | 52.64 | -36.1407 | 53.777 |
| 38 | 15.4 | 6.2 | 12.6 | 85 | 50 | 37.1 | 38.06 | -17.684 | 36.988 |
| 39 | 8.6 | 7.8 | 19.4 | 35 | 50 | 31.8 | 32.26 | 36.554 | 31.788 |
| **40** | **8.6** | **6.2** | **19.4** | **35** | **80** | **47.8** | **47.92** | **64.121784** | **47.676** |
| **41** | **15.4** | **7.8** | **19.4** | **35** | **80** | **59.2** | **59.5** | **56.0406** | **59.567** |
| **42** | **15.4** | **6.2** | **19.4** | **85** | **50** | **37.8** | **59.5** | **-12.079** | **37.252** |
| **43** | **12** | **7** | **16** | **60** | **65** | **50.3** | **50.1** | **28.8393** | **50.241** |
| **44** | **12** | **9** | **16** | **60** | **65** | **50.4** | **49.22** | **27.6799** | **51.106** |
| **45** | **15.4** | **6.2** | **19.4** | **85** | **80** | **63.1** | **63.41** | **17.678472** | **62.664** |
| **46** | **15.4** | **7.8** | **19.4** | **35** | **50** | **35.3** | **36.4** | **28.5024** | **36.251** |
| **47** | **15.4** | **7.8** | **12.6** | **35** | **80** | **58.7** | **58.78** | **38.420984** | **58.759** |
| **48** | **15.4** | **6.2** | **12.6** | **35** | **50** | **34.4** | **35.13** | **17.885984** | **34.127** |
| **49** | **12** | **7** | **16** | **60** | **65** | **50.3** | **50.1** | **28.8393** | **50.241** |
| **50** | **8.6** | **7.8** | **12.6** | **85** | **50** | **34.2** | **35.13** | **-8.743408** | **35.147** |

**40-50** data sets are unseen test data.

CD: current density; IpH: Initial pH; PD: Plate distance; UVI: UV intensity and RT: Reaction time