Supplementary Material

## Supplementary Table

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Coating Parameters A020** | **Coating Parameters A021** | |
| Matrix | NOA73 | NOA73 | |
| Graphene | 2% w/w | 2% w/w | |
| Zinc | 5% w/w | - | |
| Mixing | Magnetic stirring 5 min | Magnetic stirring 5 min | |
| Spray pressure | 1.7 bar | 1.7 bar | |
| Number of spray passes | 2 horizontal, 2 verticals | 2 horizontal, 2 verticals | |
| Nozzle size | 0.5 mm | 0.5 mm | |
| Curing | 150C for 12h | 150C for 12h | |
| **Characterization** | **A020** | **A021** |
| Visual aspect | Uniform | Uniform |
| Thickness | 9.9 µm | 8.7 µm |
| Adhesion | Class 0 | Class 0 |
| NSSt | No sign of corrosion, the coating integrity is maintained.  Precipitation of ZnO powder | No sign of corrosion, the coating integrity is maintained. |
| Resistance | 1.1Ω to 1.8 Ω | 5kΩ |

**Supplementary Table s1.** Parameters and results for the A020 and A021 coatings.

## Supplementary Figures



**Supplementary Figure s1.** NOA73 coating loaded with 1% w/w graphene.

Graphical user interface, application

Description automatically generated

**Supplementary Figure s2.** LEXT roughness profile for the A020 coating.

Graphical user interface, application

Description automatically generated

**Supplementary Figure s3.** LEXT roughness profile for the A021 coating.