**Supplementary material**

**Banana peel powder biosorbent for removal of hazardous organic pollutants from wastewater**

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Figure S1. Kinetic models and intraparticle diffusion fits for MB removal using green (A, B), semi-ripe (C, D), and ripe (E, F) BPP. Conditions: 50 mg of BPP (biosorbent) and 50 mL MB dye solution at C0 = 50 mg L-1.

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Figure S2. Fitted curves of the diffusion-chemisorption model for green (A), semi-ripe (B), and ripe (C) BPP. Conditions: 50 mg of BPP (biosorbent) and 50 mL MB dye solution at C0 = 50 mg L-1.

Table S1. Parameters obtained from the diffusion-chemisorption model for MB removal using green, semi-ripe, and ripe banana peel flour as biosorbent.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameters** | **Ripeness stage** | | | |
| *Green* | *Semi-ripe* | *Ripe* |
| **Diffusion-chemisorption** |
|  | 32.76 | 31.40 | 26.25 |
|  | 33.26 | 36.85 | 36.61 |
|  | 0.99651 | 0.99158 | 0.99479 |
| Residual sum of squares | 1.92.10-5 | 3.79.10-5 | 2.37.10-5 |

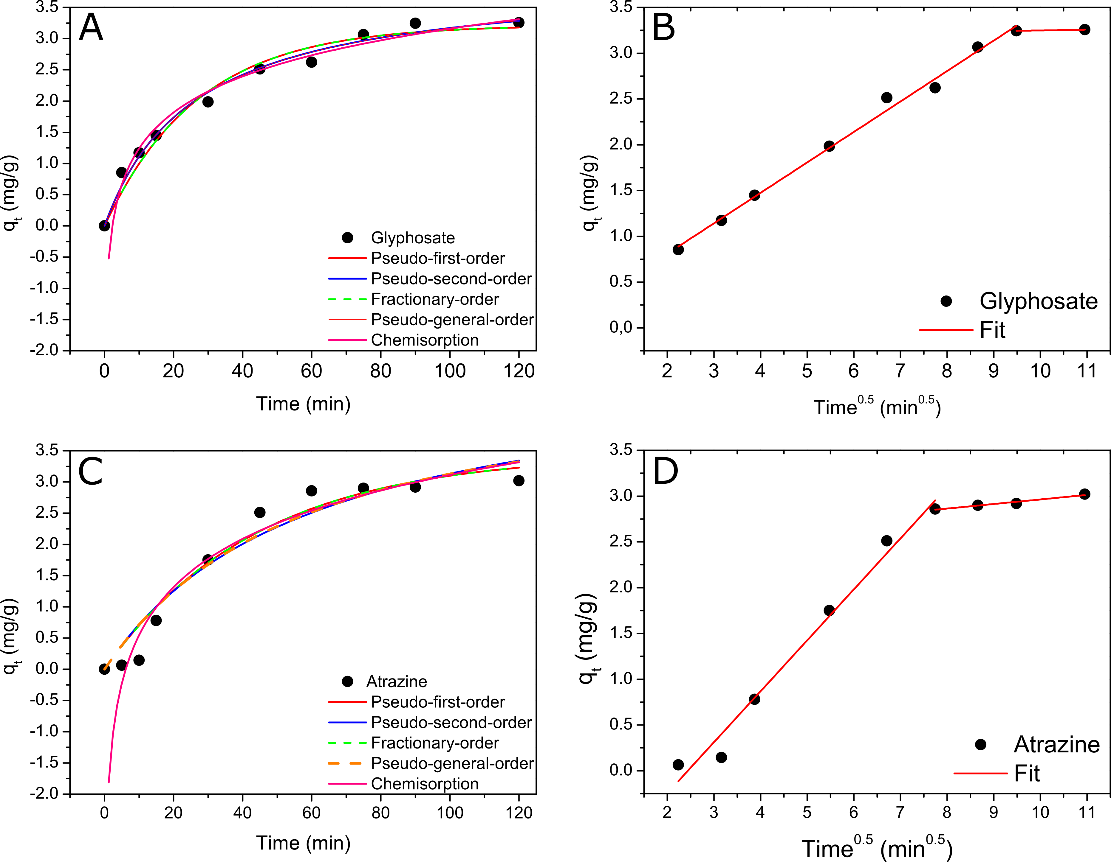


Figure S3. Fitted curves of the different kinetic models studied for semi-ripe BPP using glyphosate (A) and atrazine (C) as a pollutant and the intraparticle diffusion fit for glyphosate (B) and atrazine (D). Conditions: 60 mg of semi-ripe BPP and 10 mL of the pesticide at C0 = 20 mg L-1.