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Sulfate improves cadmium tolerance by limiting cadmium accumulation, modulation of sulfur metabolism and antioxidant defense system in maize

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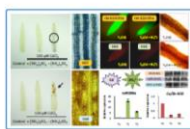
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Graphical abstract:



Highlights:

- Study highlights role of added sulfate in alleviating Cd stress effects in maize.
- Presence of excess sulfate markedly reduced Cd uptake and tissue Cd accumulation.
- Sulfate application markedly restored shoot biomass under Cd treatment.
- Histochemical staining indicates severe oxidative burst following Cd stress.
- Maintaining high GSH and PC levels are essential for plant survival under Cd stress.

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