Urban sediment: a specific geochemical signature compared to natural sediments?

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Contaminated sediment

- Evolution of pollutants

Rich in OM and Fe

Organic and inorganic pollutants

Microbial activities

Urban sediment geochemical property specific vs. other sediments?

- Generalization and comparison of geochemical properties to other kinds of sediments (19 basin sediment samples in Lyon + 19 sediment samples from scientific paper researches)
  - **Correlation matrix** → Relationships between metals & particle size & OM
  - **PCA** → Comparison of content pattern & identification of key factor
  - **Clustering** → Gathering of similar sediments
RESULTS & CONCLUSIONS

- All sediments polluted by trace metals
- Large amount of anthropogenic contaminants from nearby urban areas
- Urban sediments have a specific urban geochemical signature