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Editorial

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Editorial

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Clean soil, sediment and water are essential for healthy life. Unfortunately, soil, sediment and water in many parts of the world are contaminated by industrial activities. Therefore, it is important for the civil engineering profession to develop efficient and cost-effective technologies to remediate the above.

Innovative biological, chemical and physical methods can be applied to remediate contaminated soil, sediment and water; however, the following are the most prevalent methods used in remediation: solidification/stabilisation of contaminated soils; dredging and secure disposal of contaminated sediments; and pumping and treatment of contaminated groundwater. None of these methods are either innovative or cost effective.

This themed issue on remediation of contaminated soil, sediment and water is in response to a call for publications on innovative methods. It includes seven papers; four are dedicated to the treatment or utilisation of contaminated water, two discuss treatment of contaminated soil and the last paper covers in-situ treatment of contaminated sediment.

Batagoda *et al.* (2019a) describe an innovative drinking water treatment method using nano-ozone, which can be adopted to treat even emerging contaminants in drinking water. The paper by Katal *et al.* (2019) describes an innovative method of using polypyrrole- and polyaniline-supported titanium dioxide (TiO₂) for the removal of pollutants from water. Beemer *et al.* (2019) investigated the sorption properties of peroxidase-catalysed polyphenolic resin to enable capture of aromatic compounds for the treatment of wastewater. Ibuot *et al.* (2019) present a case study on the assessment of the impact of leachate on hydrogeological repositories in Uyo, Southern Nigeria. Ra *et al.* (2019) present a study on microbial combination and nutrients in remediation of petroleum-contaminated soil. Liu *et al.* (2019) describe a case study on integrated assessment of an oil leaking accident site with long-term artificial interference. Finally, Batagoda *et al.* (2019b) discuss an innovative method of using ultrasound and ozone nanobubbles

for the remediation of heavy-metal-contaminated sediments, which is an in-situ treatment method.

All seven articles show innovative ways of remediating or utilising contaminated soil, sediment and water. However, there is still a significant need to discover new treatment methods for contaminated soil, sediment and water that are not only efficient, but also cost effective.

We hope you find this special issue stimulating and informative. We invite our readership to comment on the articles in this themed issue by submitting up to 500 words to the Editor at journals@ice.org.uk.

REFERENCES

- Batagoda JH, Hewage SDA and Meegoda JN (2019a) Nano-ozone bubbles for drinking water treatment. *Journal of Environmental Engineering and Science* **14**(2): 57–66, <https://doi.org/10.1680/jenes.18.00015>.
- Batagoda JH, Hewage SDA and Meegoda JN (2019b) Remediation of heavy-metal-contaminated sediments in USA using ultrasound and ozone nanobubbles. *Journal of Environmental Engineering and Science* **14**(2): 130–138, <https://doi.org/10.1680/jenes.18.00012>.
- Beemer KW, Taylor KE and Biswas N (2019) Sorption properties of peroxidase-catalysed polyphenolic resin enable aromatics' capture. *Journal of Environmental Engineering and Science* **14**(2): 90–96, <https://doi.org/10.1680/jenes.18.00030>.
- Ibuot JC, Okeke FN, Obiora DN and George NJ (2019) Assessment of impact of leachate on hydrogeological repositories in Uyo, Southern Nigeria. *Journal of Environmental Engineering and Science* **14**(2): 97–107, <https://doi.org/10.1680/jenes.18.00014>.
- Katal R, Farahani MHDA, Masudy-Panah S, Ong SL and Hu J (2019) Polypyrrole- and polyaniline-supported TiO₂ for removal of pollutants from water. *Journal of Environmental Engineering and Science* **14**(2): 67–89, <https://doi.org/10.1680/jenes.18.00003>.
- Liu F, Yi S, Zheng W *et al.* (2019) Integrated assessment of oil leaking accident site with long-term artificial interference. *Journal of Environmental Engineering and Science* **14**(2): 118–129, <https://doi.org/10.1680/jenes.18.00037>.
- Ra T, Zhao Y and Zheng M (2019) Study of microbial combination and nutrients in remediation of petroleum-contaminated soil. *Journal of Environmental Engineering and Science* **14**(2): 108–117, <https://doi.org/10.1680/jenes.19.00002>.