

## Special Issue on “Innovative and Eco-friendly Soil Treatment Technologies”

### Preface

We would like to present the special issue on *Innovative and Eco-friendly Soil Treatment Technologies* of the *Geomechanics and Engineering, An International Journal* (ISSN: 2005-307X). As *Geomechanics and Engineering* has strong reputation for quality in the field of soil and geotechnical engineering, this special issue also devotes itself to introducing validated emerging technologies on soil treatment.

This special issue is an extension of the success of the 2016 International Conference on Geomechanics and Engineering (ICGE16) held in August 2016, Jeju, Korea. Papers which devote themselves to innovative and environmentally-friendly soil treatment researches from laboratory scale attempts to practical implements were selected after the conference, with accompanying fully updated paper submission and peer review processes. Emerging innovative technologies through multidisciplinary (geotechnical; chemical; and biological) convergences is the main topic of this special issue. In this spirit, 9 scientific articles are presented in this volume as:

- Evaluation of the grouting in the sandy ground using bio injection material
- Polylysine biopolymer for coagulation of contaminated water
- Factors affecting waterproof efficiency of grouting in single rock fracture
- Strength and slake durability characteristics of biopolymer-treated sand of Al-Sharqia desert, Oman
- Application of magnesium to improve uniform distribution of precipitated minerals in 1-m column specimens
- Dynamic properties of gel-type biopolymer-treated sands evaluated by Resonant Column (RC) tests
- Geotechnical shear behavior of xanthan gum biopolymer treated sand from direct shear testing
- In situ viscoelastic properties of insoluble and porous polysaccharide biopolymer dextran produced by *Leuconostoc mesenteroides* using particle-tracking microrheology
- Measuring elastic moduli of bacterial biofilms in a liquid phase using Atomic Force Microscopy (AFM)

Each article provides valuable findings and recommendations on innovative and eco-friendly soil treatment. We appreciate all authors for their faithful research and reviewers for their sincere contribution to peer reviews.

It is our hope that this fine collection of the articles will be a valuable resource for *Geomechanics and Engineering* readers and will stimulate further research into the vibrant area of innovative and eco-friendly soil treatment.

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