

Helmholtz Call for Chinese Applicants Interested in Running for CSC 2021 Fellowship

Helmholtz Centre: Forschungszentrum Jülich GmbH – www.fz-juelich.de
Department/Institute: Institute of Bio- and Geosciences, Agrosphere (IBG-3)
Supervising scientist: Prof. Dr. Roland Bol
University for registration or for a future degree: Bonn (Germany) or Amsterdam (NL)
Research Field: Biogeochemistry
Position open for: **PhD Student X** **Sandwich PhD Student**
Title of the research: Better liming for sustainable agriculture
More description of research topic:

Globally, lime is applied to agricultural land to ameliorate soil acidity and to create and maintain a soil pH favourable for optimal plant growth. The direct effect of liming on agricultural soils with respect to final soil C balance, greenhouse gas emissions (GHGs) and associated sustainability issues continues to remain under intense scientific scrutiny. These discussions have been further fuelled by recent studies, suggesting that consideration should be given to the fact in agricultural systems there a clear interplay between liming (raising soil pH and associate C mineralisation) and mineral N fertiliser applications (optimising crop production and soil N status, but decreasing soil pH). In reverse, the critical pH-reducing effects of N fertiliser when applied to carbonate containing agricultural soils and the associated soil inorganic C losses also remain poorly understood and quantified. These aspects will be addressed and examined in over the course of Ph.D. research program envisaged

Specific requirements:

Graduated in agriculture, chemistry, biogeochemistry, soil science or environmental sciences. Experience in (stable) isotope analyses, as well as statistical data analysis skills are beneficial.

Working Place: Forschungszentrum Jülich, Germany (near Cologne)

Earliest Start: September 2021

Language Requirement: Very good knowledge of English language, written and spoken. German language courses are organised in the context of our in-house training program and are free of charge.

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