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【701】 Quantitative imaging and understanding of water dynamics and flow in soil and roots

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Roots have long been considered the “hidden half” of plants. Due to the opaqueness of soils, root research has focussed on roots growing in artificial growth media, such as agar or hydroponics. Recent advances in imaging methods has led to unprecedented progresses in studying root functions in soils. Neutron imaging, thanks to the high sensitivity of neutrons to water, has been particularly useful for revealing root water uptake patterns and for identifying new mechanisms of how plants take up water from the soil. This talk will show examples of neutron imaging of water dynamics in soils, roots, and at their interface.

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