Chemical & Physical Sciences
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COLLOQUIUM SEMINAR TALK
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Revisiting Darwin's Dilemma: The "Other" Fossil Record of the Most Important Transition in the History of Life

The supposed absence of evidence of life before the Cambrian Period was explicitly noted as a serious problem by Charles Darwin in his classic book "On the Origin of Species". Although now a rich record of Ediacaran (pre-Cambrian) body fossils is known, there is still considerable debate regarding their phylogenetic affinities and the nature of the biotic changes that took place during the Ediacaran-Cambrian transition. These changes were conducive to the most dramatic evolutionary radiation in the history of life, the Cambrian explosion. Trace fossils (or ichnofossils) represent evidence of activity of organism behaviour as reflected by tracks, burrows, trails and borings, and represent a key source of information to reconstruct these evolutionary changes. During this talk, I will briefly discuss the trace fossil record of the Ediacaran-Cambrian transition, underscoring how ichnofossils can be used to provide insights into these ancient ecosystems.