Title:	Molecular Distribution and Carbon Isotope of n-alkanes from Ashtamudi Estuary, South India: Assessment of organic matter sources and paleoclimatic implications
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Abstract:	The distribution and δ13C composition of n-alkanes were used to identify organic matter (OM) sources in river dominated Ashtamudi Estuary, Southern India. A number of n-alkane indices have been calculated to illustrate the spatial variability by considering separately river dominated northern reaches and marine influenced southern part of the estuary. The carbon preference index (CPI) and average chain length (ACL) provide evidence for recycled organic inputs in the tidal zone, whereas dominant biogenic contribution has been observed in the riverine zone. The Paq and TAR indices demonstrate maximum aquatic productivity in the tidal dominated region of the Ashtamudi Estuary. The quantitative apportion of organic matter sources in Ashtamudi sediments using compound-specific carbon isotope analysis (CSIA) of long-chain n-alkane shows dominance (56-86 %) of terrestrial derived OM. The results clearly demonstrate the effectiveness of an integrated molecular and stable carbon isotope analysis for quantitatively assessing OM sources in estuarine environments.
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