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Title:	Directional migration propensity of calf thymus DNA in a gradient of metal ions
Authors:	Shikha (/jspui/browse?type=author&value=Shikha) Shandilya, Ekta (/jspui/browse?type=author&value=Shandilya%2C+Ekta) Priyanka (/jspui/browse?type=author&value=Priyanka) Maiti, Subhabrata (/jspui/browse?type=author&value=Maiti%2C+Subhabrata)
Keywords:	calf thymus DNA metal ions
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Publisher:	Royal Society of Chemistry
Citation:	Chemical Communications, 58(67), 9353-9356
Abstract:	Herein we report the migrational behaviour and spatial distribution of calf thymus DNA in a gradient of different physiologically relevant monovalent and divalent cations under two different conditions – (i) microfluidic and (ii) evaporating droplets. Amplified phoresis toward high concentrations of Mg ²⁺ and Ca ²⁺ compared to other ions and non-uniform DNA coating in a gradient of ions were observed. This process, which was governed by the effective charge and diffusion coefficient of the DNA–metal ion complex, can have potential applications in nucleic acid-based spatiotemporal surface patterning, biosensors, and dynamic biocolloidal assembly and transport.
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