

Open data management. Description of available data and	
metadata related to a publication	
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Dataset ID	SUMO_ICMol_Rosaleny_2019_01
List of data files	c9cp01909j1.pdf
available	c9cp01909j2.zip (amberhack2simpre.py,
	hack_atoms.f90, makefile, path.txt, pmemd.f90,
	runmd.f90)
Methodology	Implementation of the first in silico exploration of the
	explicit time-dependent dynamics of spin energy
	levels due to thermal molecular movements,
	employing force fields. We combined two inexpensive
	computational tools, namely molecular dynamics (MD)
	as implemented in the Amber2017 package and
	crystal field modelling based on effective point
	charges as implemented in the SIMPRE software to
	extract the energies of the 13 MJ states of the $J = 6$
	ground multiplet at different times. The studied
	system was a family of peptides known as Lanthanide
	Binding Tags (LBTs).
Data processing and	Details of MD and spin energy level calculations, B3LYP
software needed	and RPMD results, Fortran & Python scripts, and
	autocorrelation and fast Fourier transform plots
Access to the data	As files in the Electronic Supplementary Information
	via the journal website:
	https://pubs.rsc.org/en/content/articlelanding/2019/cp/
	<u>c9cp01909j</u>

