The wettability of graphite and glassy carbon by $CsNO_3 - NaNO_3$ molten salt

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The low thermal conductivity of phase change materials is one of main issues that should be resolved. In order to overcome this problem, our goal is to disperse carbon fibers in $CsNO_3 - NaNO_3$ molten salt. In this work, the contact angle of Carbon surfaces (Graphite and glassy carbon) by cesium nitrate-sodium ($CsNO_3 - NaNO_3$) binary molten salt was measured using the sessile drop method. The system is well wetting with the contact angle at an interval of 22-82°. The Butler equation was used to estimate the concentration dependence of surface tension and that of the contact angle theoretically. The theoretical results are reasonably reproducing the measured values.