Electronic Supplementary Material (ESI) for RSC Advances.

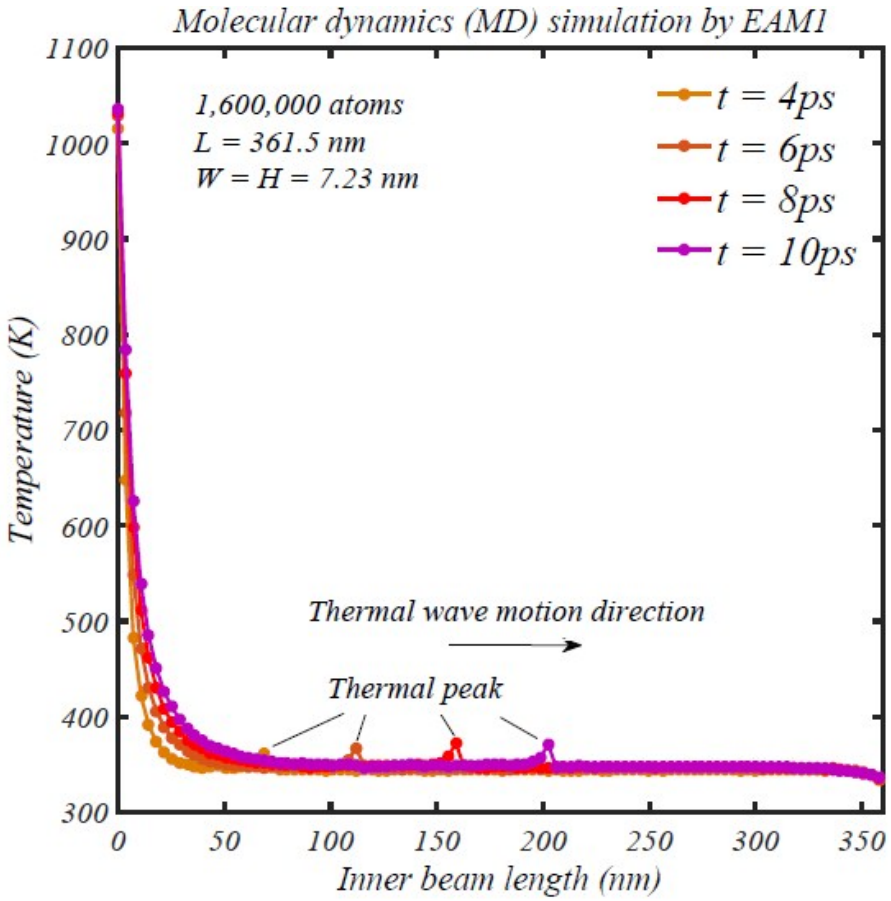

Fig. A1. Evolution of temperature-driven wave propagation excluding the mechanical (sound) wave.

Figure A2 shows the thermal wave predicted by alternative four EAM potentials when the mechanical wave component of temperature-driven wave is excluded from temperature profile. Opposed to temperature-driven wave presented in Fig. 10, thermal wave presented in Fig. A2. is independent of EAM potentials.

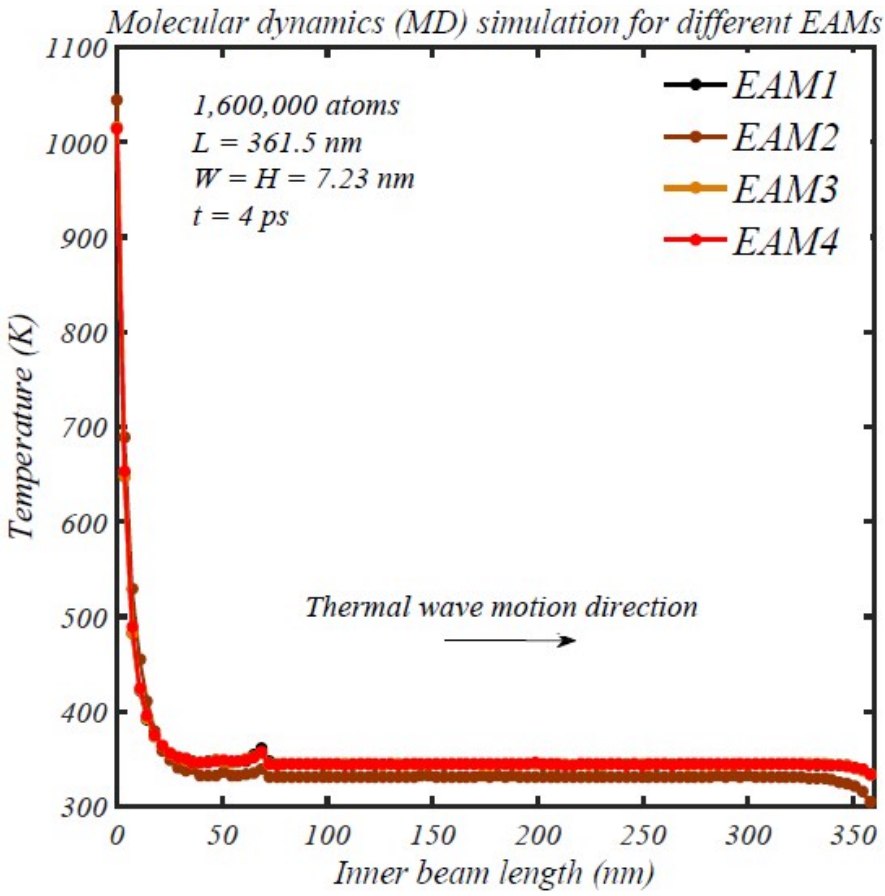

Fig. A2. Temperature-driven wave propagation excluding the mechanical (sound) wave predicted by alternative EAM potentials (*EAM1*[85] , *EAM2* [86], *EAM3* [87], and *EAM4* [88]).