Figures

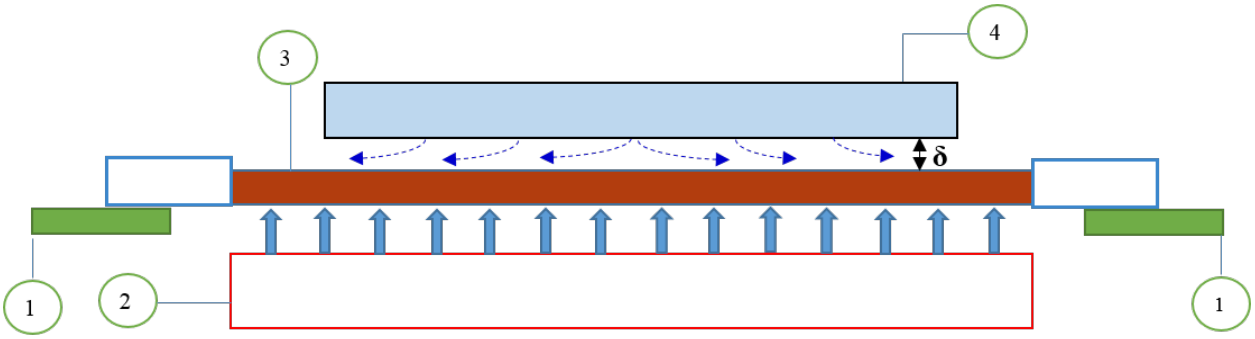
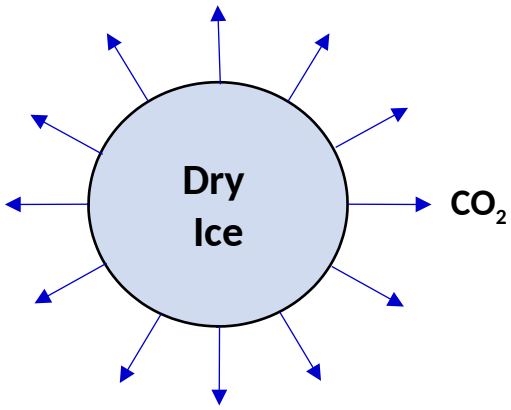
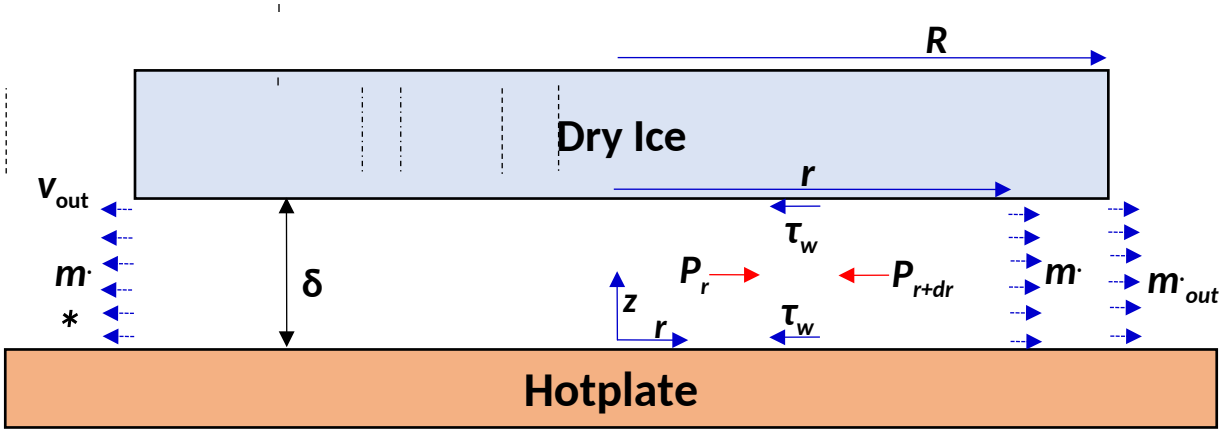


Figure 1: Schematic illustration of the experimental apparatus, used in the current study: 1- Load cells, 2- Radiating heating elements, 3-Suspending copper hotplate, and 4- Dry ice block



(a)



(b)

Figure 2: (a)- Bird view of gas passage, and **(b)-** Illustration of the notations, used in the formulation of the momentum balance.

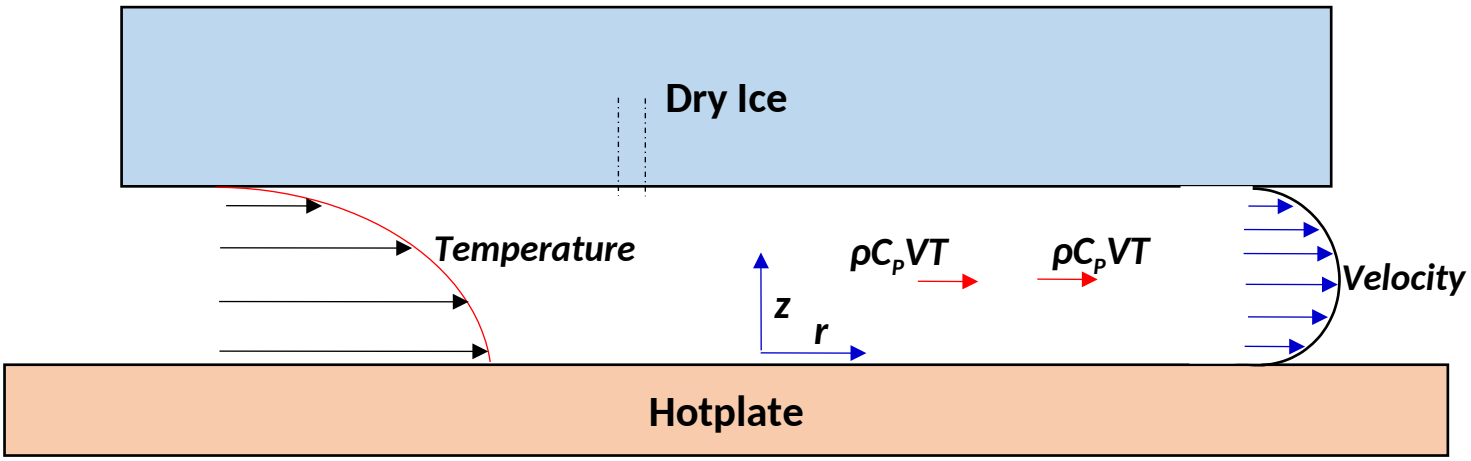


Figure 3- Schematic view of the sublimation system, with temperature and velocity profiles

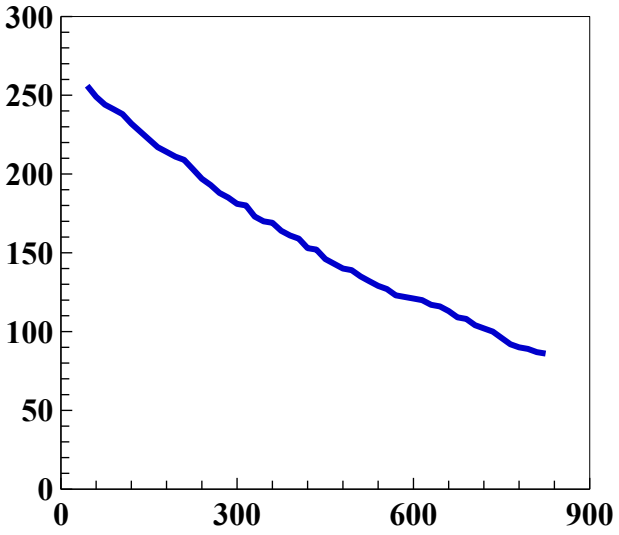
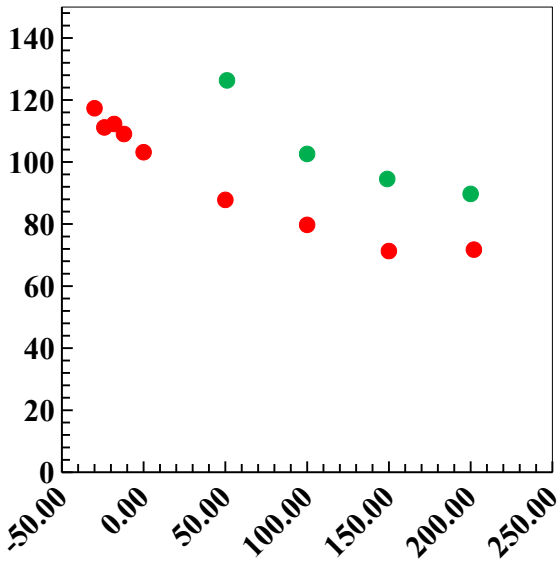
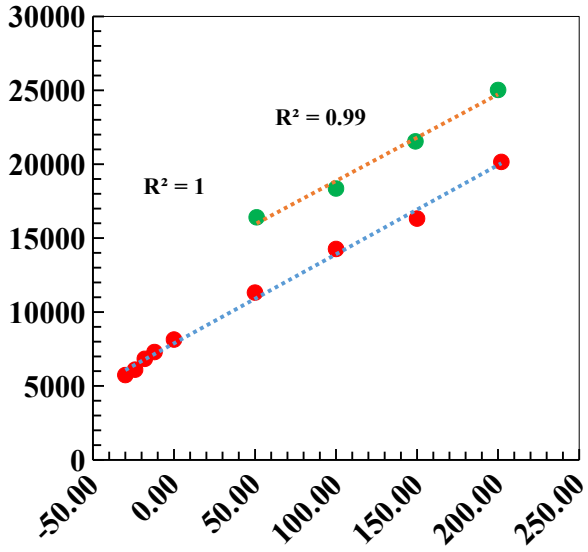


Figure 4- Temporal variation of mass of the dry ice block, for two dimensional case with T_W = 200 ^oC, Diagram was plotted from recorded data of the real-time data system.

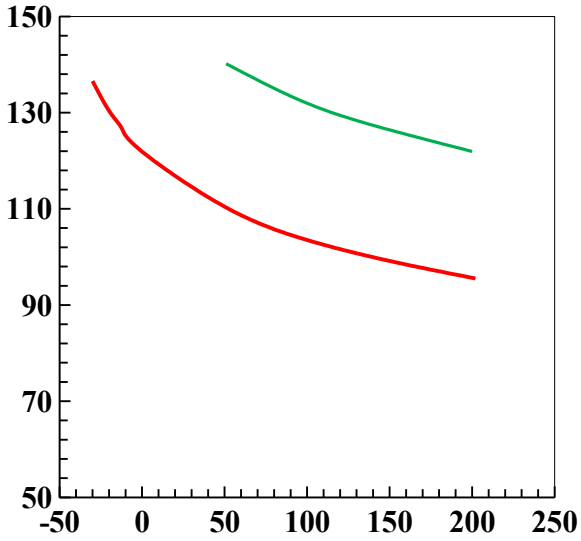


(a)

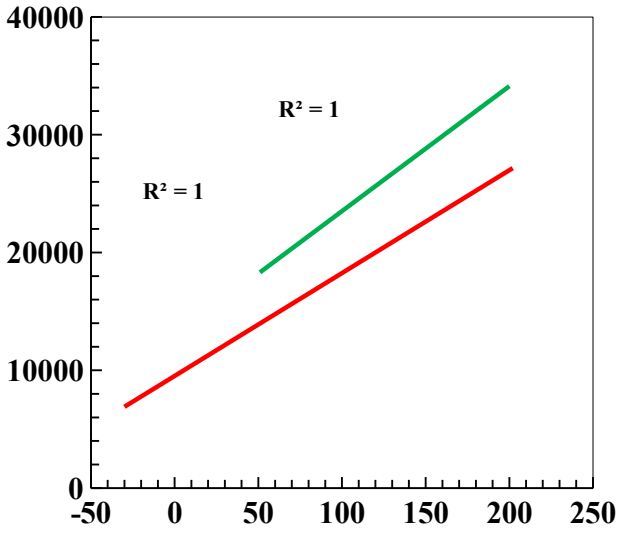


(b)

Figure 5- (a): Experimental sublimation heat transfer coefficient, and (b): Experimental heat flux, at different temperatures; in both panels: ●: Small circle (D=60 mm), and ●: Large circle (D=90 mm)

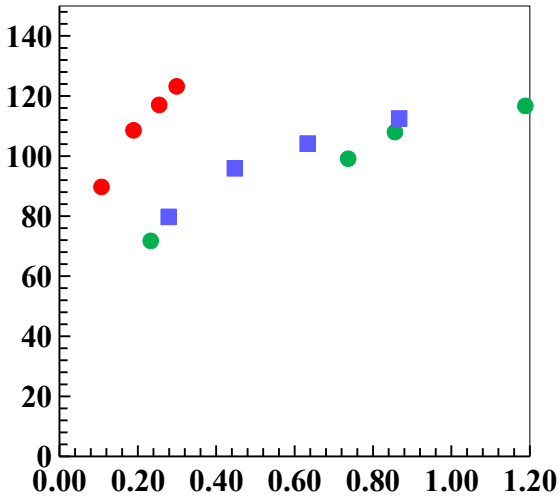


(a)

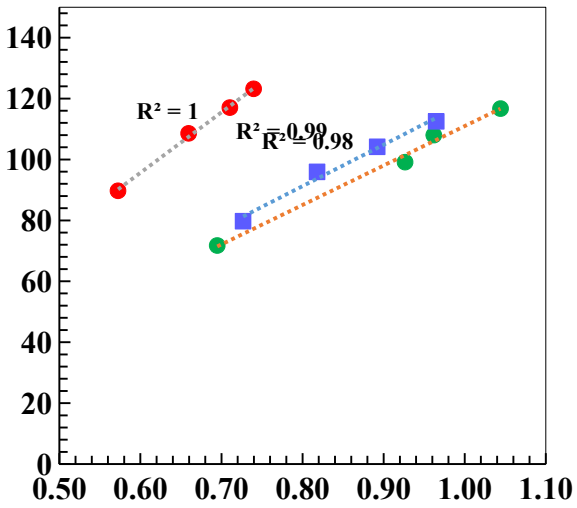


(b)

Figure 6: (a)- Trend of calculated heat transfer coefficient by linear gradient model, and (b)- Trend of Calculated heat flux by linear gradient model; in both panels: —: Small circle (D=60 mm), and —: Large circle (D=90 mm)



(a)



(b)

Figure 7- (a): Effect of mass of the dry ice block on heat transfer coefficient, and (b): Drawing of heat transfer coefficient versus the fourth root of mass; ●: D=90 mm, T= 200 ºC, ■ D=90 mm, T= 100 ºC and ●: D=60 mm, T= 200 ºC,