$$\boldsymbol{C_{2,i+1} = C_{2,i} + \frac{C_{1,i} - C_{2,i}}{\tau} \frac{\beta}{(1-\alpha_1)(\alpha_2)} \Delta t}$$

$$C_1 \beta \nu = C_2 \beta \nu + (1-\alpha_1)(\alpha_2) V \frac{\mathrm{d}C_2}{\mathrm{d}t} \implies$$

$$\implies C_1 \beta = C_2 \beta + (1-\alpha_1)(\alpha_2) \tau \frac{\mathrm{d}C_2}{\mathrm{d}t} \implies$$

$$\implies \frac{\mathrm{d}C_2}{\mathrm{d}t} = \frac{C_1 - C_2}{\tau} \frac{\beta}{(1-\alpha_1)(\alpha_2)} \implies$$

$$\implies \frac{\Delta C_2}{\Delta t} = \frac{C_{2,i+1} - C_{2,i}}{\Delta t} = \frac{C_{1,i} - C_{2,i}}{\tau} \frac{\beta}{(1-\alpha_1)(\alpha_2)} \implies$$

$$\implies = C_{2,i+1} = C_{2,i} + \frac{C_{1,i} - C_{2,i}}{\tau} \frac{\beta}{(1-\alpha_1)(\alpha_2)} \Delta t$$