$$\boldsymbol{C_{2,i+1} = C_{2,i} + \frac{C_{1,i} - C_{2,i}}{\tau} \frac{\beta}{(1-\alpha)\,0.5}\,\Delta t}$$

$$\nu\,\beta\,C_1 = \nu\,\beta\,C_2 + (1-\alpha)\,0.5\,V\,\frac{\mathrm{d}C_2}{\mathrm{d}t} \implies$$

$$\implies \beta\,C_1 = \beta\,C_2 + (1-\alpha)\,0.5\,\tau\,\frac{\mathrm{d}C_2}{\mathrm{d}t} \implies$$

$$\implies \frac{\mathrm{d}C_2}{\mathrm{d}t} = \frac{C_1 - C_2}{\tau}\,\frac{\beta}{(1-\alpha)\,0.5} \implies$$

$$\implies \frac{\Delta C_2}{\Delta t} = \frac{C_{2,i+1} - C_{2,i}}{\Delta t} = \frac{C_{1,i} - C_{2,i}}{(1-\alpha)\,0.5\,\tau}\,\beta \implies$$

$$\implies C_{2,i+1} = C_{2,i} + \frac{C_{1,i} - C_{2,i}}{\tau}\,\frac{\beta}{(1-\alpha)\,0.5}\,\Delta t$$