

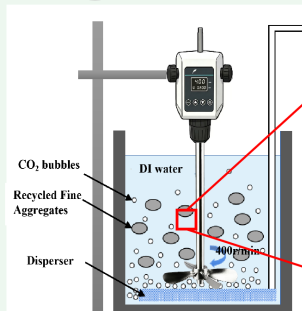
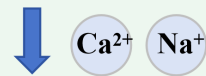
Effect of particle size on CO₂ carbonation behavior

RFA particle size >1.18mm

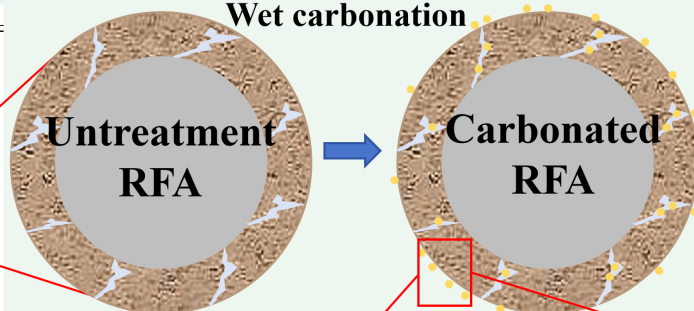
Low specific surface area

Slow leaching rates of Ca²⁺ and Na⁺

Low initial pH value



Wet carbonation



Formed a dense carbonation layer on the aggregate surface

Decreased the total porosity

Optimized the physical properties of the aggregates

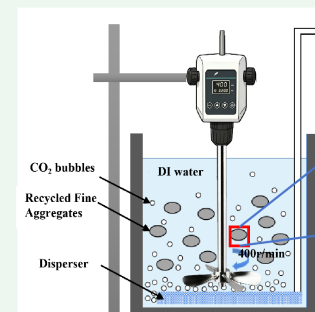
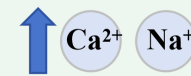


RFA particle size <1.18mm

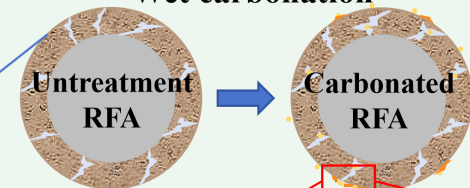
High specific surface area

Fast leaching rates of Ca²⁺ and Na⁺

High initial pH value



Wet carbonation



C-S-H gel on the aggregate surface carbonated

Increased total porosity

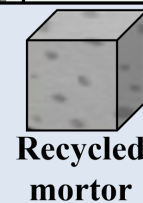
Deteriorated the physical properties of the aggregates



Particle size

Carbonation behavior

Properties of RFA



Carbonated RFA

Untreatment RFA

+25.1%

Compressive strength