

Multimodal Microstructure and Mechanical Properties of AZ91 Mg Alloy Prepared by Equal Channel Angular Pressing plus Aging

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As shown in Figure S1, the die of RD-ECAP has two perpendicular square channels with equal cross-sections. The channel angle of the die is 90° , and the curvature angle is 0° . The left side and bottom plates of the die holder confine the motion of the left horizontal and bottom punches, respectively. The upper punch is pressed by the plunger and the sample is extruded through the right horizontal channel. After one pass, the die is rotated 90° anticlockwise. This makes the ECAP process return to the initial configuration, thus the subsequent pressing cycle can be conducted without billet removal. The effective strain per pass in RD-ECAP is about 1.15.

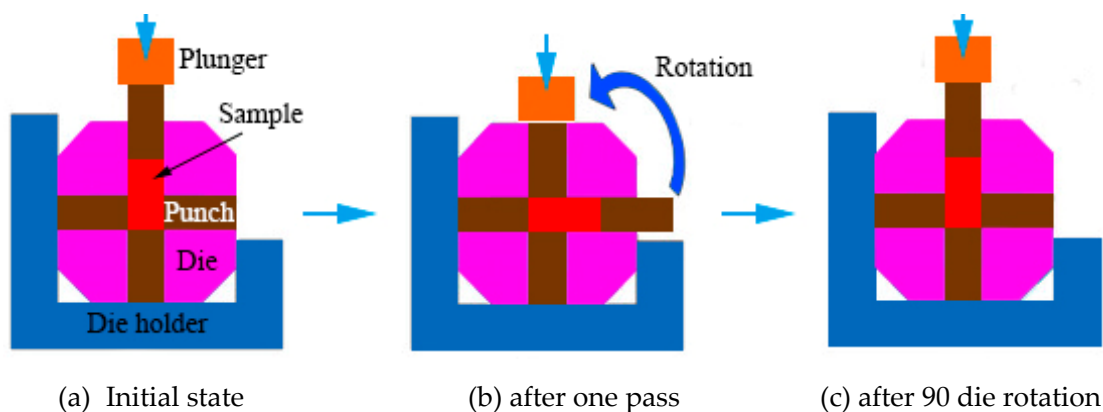


Figure S1 Process sequence of RD-ECAP