

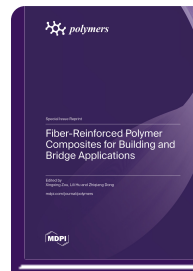
*Special Issue Reprint*

## **Fiber-Reinforced Polymer Composites for Building and Bridge Applications**

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Fiber-reinforced polymer (FRP) material, known for its high strength, light weight, and excellent durability under harsh conditions or in coastal environments, has been widely used as a popular material in the strengthening, repairing, and retrofitting of existing structures. Additionally, the combination of FRP and traditional construction materials has been increasingly employed in the construction of buildings and bridges. Recently, new fibers (such as flax) and new matrixes (such as geo-polymer matrixes) have shown great potential in lieu of traditional FRP composites in many engineering scenarios. For the safe and effective application of FRP composites in civil engineering, plausible approaches to aid in estimating the performances of such structures need to be developed. The three Guest Editors organized this Special Issue (SI) that aimed to present recent advances and emerging cross-disciplinary approaches in FRP composites by collecting predominantly integrated studies pertaining to the performance of FRP composite structures. Studies from experimental testing, analytical approaches, numerical simulation, and emerging algorithms on the performance of strengthening existing structures and new-built structures were published. Nine published articles covered the following directions: FRP-strengthened concrete structures, thin-walled FRP composites for building and bridge applications, and the structural behaviors of FRP under actions of fire or environmental factors.

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