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Rearch of compact repetitive pulsed power system based on Marx generator

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By adopting Marx generator technology,a compact repetitive pulsed power system has been developed which consists of a repetitive power supply and a Marx generator.By utilizing multiplex inverter boost-doubling rectifier circuits to operate in parallel,we designed and tested a repetitive power supply which can transform 30V DC to 100kV DC and charge the capacitor to 100kV repetitively.The Marx consists of 16 stages with integrated folder configuration.Each stage of the Marx consists of three 22nF capacitors in parallel.By integrating the Marx with the repetitive power supply,a compact repetitive pulsed power system has been developed.We have obtained 5 pulses with repetition rate of 5Hz on a 14Ω load.The peak voltage and peak power are more than 700kV and 35GW respectively.

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