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(57) Abstract :
Title: METHOD, SYSTEM AND APPARATUS FOR CHARGING AN ELECTRIC VEHICLE ABSTRACT An electric vehicle charging system (211) comprising an AC input voltage source (202) providing a varying frequency of input current to an electric vehicle charging station (240), an AC-AC converter (209) with reduced number of switches in the electric vehicle charging station (240), an onboard AC-DC H-bridge converter (226) within the electric vehicle (242), and a system load comprising a battery (224) within the electric vehicle (242), wherein the AC-AC converter (209) and the AC-DC H-bridge converter (226) reduces overall number of power conversion stages while charging the battery (224) within the electric vehicle (242). In an embodiment, the number of switches in the AC-AC converter (209) are reduced from conventional eight switches to six switches in that four switches are operated at high frequency inputs while remaining two are operated at fundamental frequencies within the electric vehicle charging station (240).

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