polymer, the outer layer may be formed of a second polymer, and the first polymer may have a higher melting temperature than the second polymer.

[0017] The at least one discontinuous emitter band may form electrodes of a plurality of electrode pairs. The elongated tube may include a central lumen for accommodating a guide wire.

[0018] Disclosed herein is a method of fabricating a catheter that includes mounting a shock wave electrode assembly over a first tube, the shock wave electrode assembly comprising: at least one emitter band, the at least one emitter band forming a first electrode of an electrode pair, and at least one wire, a distal end of the at least one wire forming a second electrode of the electrode pair; sliding a second tube over the first tube and the shock wave electrode assembly such that the second tube at least partially surrounds the first tube and the shock wave electrode assembly; and applying heat to cause the second tube to adhere to the first tube such that at least a portion of the shock wave electrode assembly is at least partially embedded within the second tube.

[0019] The first tube may be an extruded polymer tube. The second tube may be an extruded polymer tube. The first tube may be formed of a first polymer, the second tube may be formed of a second polymer, and the first polymer may have a higher melting temperature than the second polymer.

[0020] The method may include removing a portion of the second tube to create a spark gap between the first electrode and the second electrode. The method may include removing a portion of the second tube such that an outer surface of at least a portion of the second tube aligns with an outer surface of the at least one emitter band. The method may include mounting an enclosure over the second tube such that the enclosure surrounds the shock wave electrode assembly.

[0021] According to an aspect, a catheter system for treating an occlusion in a body lumen includes a catheter comprising, at a distal end portion of the catheter: an inner catheter body, at least one shock wave electrode pair comprising at least one discontinuous emitter band having an enlarged central region and one or more leg regions extending from the enlarged central region, the one or more leg regions at least partially encircling a circumference of the inner catheter body, and a wire located adjacent the at least one discontinuous emitter band, an outer catheter body at least partially encapsulating the at least

emitter band, the electrode pair may include a first electrode pair defined by the distal end of the wire and the first discontinuous emitter band and a second electrode pair defined by the proximal end of the wire and the second discontinuous emitter band, and the shock wave electrode assembly may be configured to emit a first shock wave when a voltage pulse is applied across the first electrode pair and a second shock wave when the voltage pulse is applied across the first electrode pair.

[0029] The emitter band may fully encircle the inner layer. The emitter band may include a first enlarged region, a second enlarged region, and a connecting region extending between the first and second enlarged regions. The emitter band may include an aperture extending through one of the first enlarged region and second enlarged region. The aperture may be partially defined by an edge, the edge forming the first electrode and being spaced apart from the distal end of the wire to define a spark gap sufficient to generate the shock wave.

[0030] According to an aspect, a system for treating an occlusion in a body lumen includes any of the catheters described above; and a voltage pulse generator electrically connected to the shock wave electrode assembly and configured for applying voltage pulses to the electrode pair to generate shock waves.

[0031] Disclosed herein is a method of treating an occlusion in a body lumen that includes introducing any of the catheters above into the body lumen; advancing the catheter through the body lumen to a position proximate to the occlusion; and applying voltage pulses across the electrode pair to generate shock waves inside the enclosure to treat the occlusion.

[0032] In some embodiments, any of the features of any of the embodiments described above and/or described elsewhere herein may be combined, in whole or in part, with one another. Additional advantages will be readily apparent to those skilled in the art from the following figures and detailed description. The aspects and descriptions herein are to be regarded as illustrative in nature and not restrictive.

BRIEF DESCRIPTION OF THE FIGURES

[0033] Illustrative aspects of the present disclosure are described in detail below with reference to the following figures. It is intended that the embodiments and figures disclosed herein are to be considered illustrative rather than restrictive.