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(71) Applicant: **GREENE, TWEED TECHNOLOGIES, INC.** [US/US]; 1105 North Market Street, Suite 1300, Wilmington, DE 19801 (US).

(72) Inventors: **REICHL, Gary**; 6388 Wild Cherry Drive, Coppersburg, PA 18036 (US). **GUREVICH, Eugene**; 4148 Yorktown Road, Coopersburg, PA 18036 (US). **PERIYASAMY, Mookkan**; 2623 Pennington Drive, Wilmington, DE 19810 (US). **QUARTAPELLA, Carmen J.**; 3854 Center Avenue, Collegeville, PA 19426 (US). **PIACENTE, Nicholas P.**; 1046 Wintergreen Terrace, Rockville, MD 20850 (US).

(74) Agent: **CALDERONE, Lynda L.** et al.; Calderone Bullock LLC, Two Greentree Centre, 9000 Lincoln Drive East, Suite 301, Marlton, NJ 08053 (US).

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(54) Title: POLYMER AND ELASTOMER COMPOSITIONS HAVING CARBON NANOSTRUCTURE ADDITIVES AND ARTICLES FORMED THEREFROM FOR USE IN EMI AND RFI SHIELDING AND IN PRESSURE SENSING SEALS HAVING QUANTUM TUNNELING COMPOSITE EFFECTS

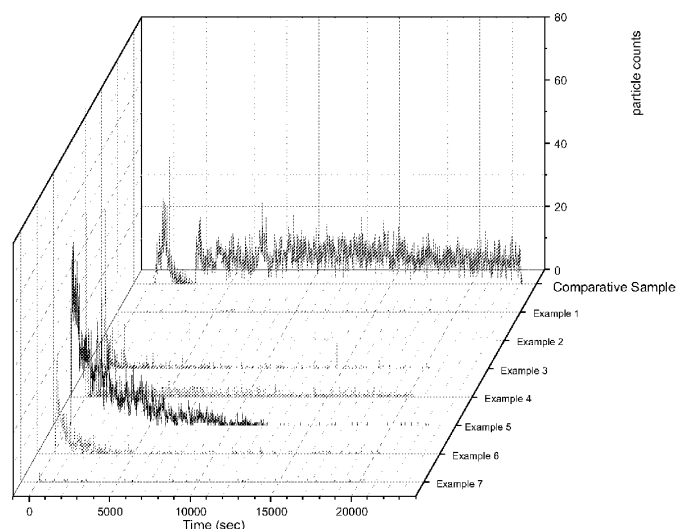


FIG. 1

(57) Abstract: Compositions of at least one matrix polymer that may be a thermoplastic and/or curable polymer having at least one functional group for crosslinking for use in forming articles are disclosed as well as methods for making such articles, wherein the compositions and methods include a carbon nanostructure additive that is three-dimensional, branched and crosslinked. The resulting articles can in one embodiment provide a volume resistivity level of about 0.5 ohm-cm or less which are useful in applications requiring conductivity sufficient to provide electromagnetic interference shielding and/or radio frequency interference shielding. Other articles formed using compositions disclosed herein in other embodiments can demonstrate dissipative and/or quantum tunneling effects and so are useful as self-sensing pressure sensitive articles, such as self-sensing seals.

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