



Supplementary Information

Novel Water-Based Paints for Composite Materials Used in Electromagnetic Shielding Applications

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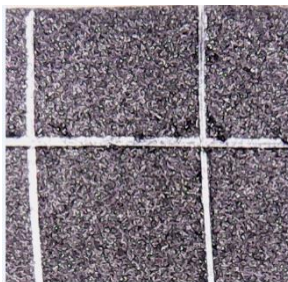

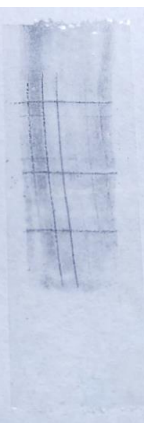



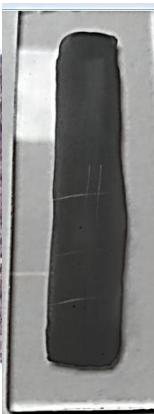






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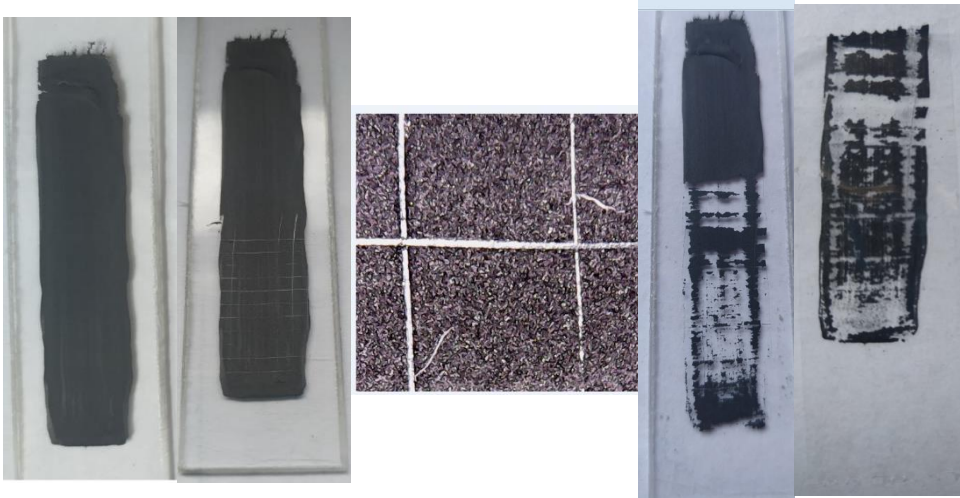


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Table S1. The adherence of the best the improved HCl (A) and HBr (B) doped PANI/graphene/PDOT:PSS water based formulation paints to various substrates measured using method of evaluating tape adhesion of a coating system cross-cut Tape Test according to ASTM D 3359.

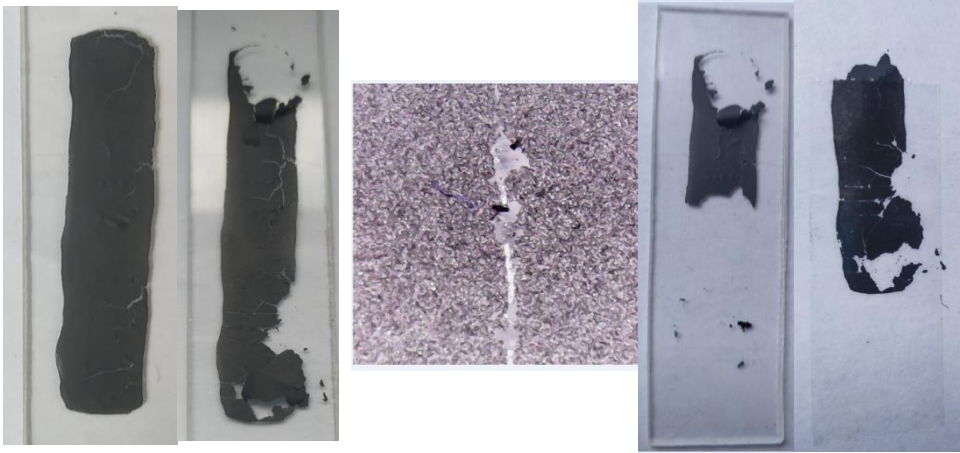
Substrate material+ Version of paint	Applied paint	After scraping	Macroshot	After tearing off the tape	Residuum at the Scotch tape	The standart ATSM D 3359 – 02*
Glass + A						5B 0 % None
Glass +B						4B Less than 5 %
Glass +Base						3B 5-15 %

Plexiglass+ A



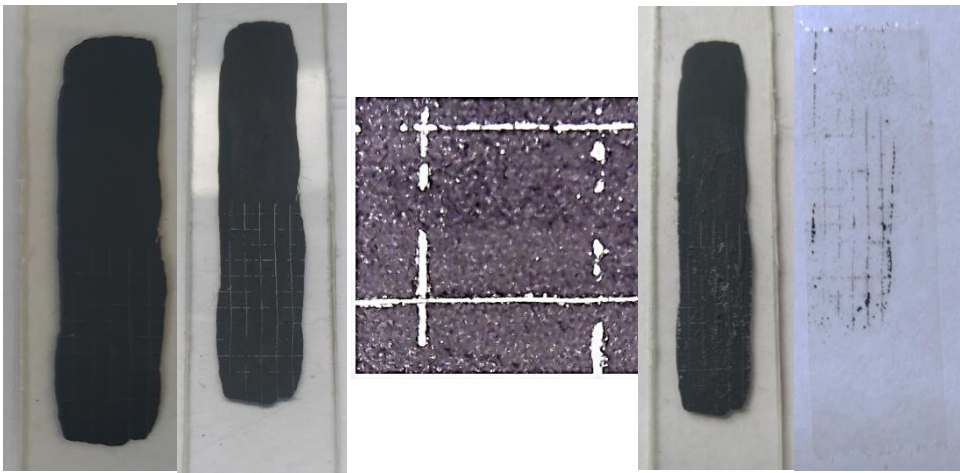
0B
Greater than 65 %

Plexiglass+B



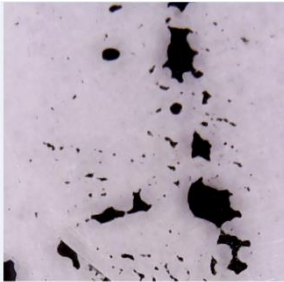

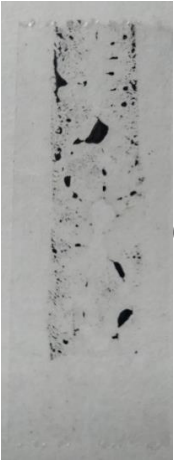


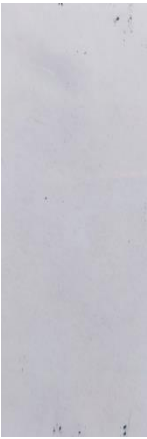



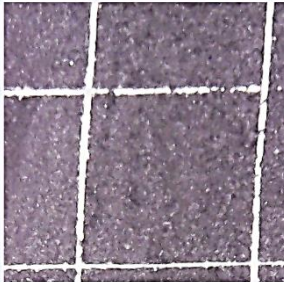




0B
Greater than 65 %

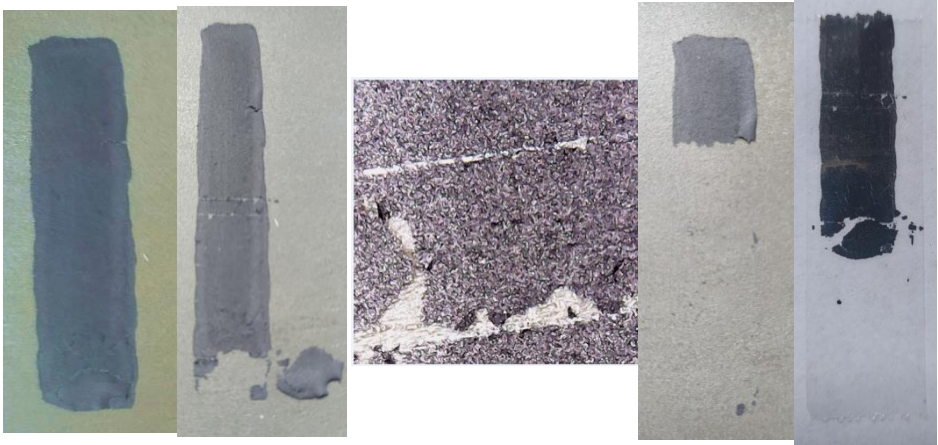
Plexiglass+Base



4B
Less than 5 %

PET + A						0B Greater than 65 %
PET +B						0B Greater than 65 %
PET+Base						4B Less than 5 %

PBT (the case of dosimeter+A



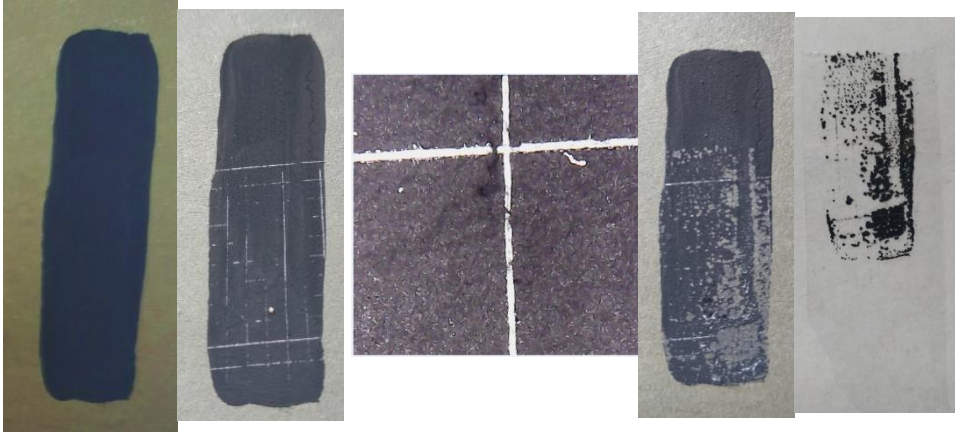
0B
Greater than 65 %

PBT (the case of dosimeter} + B


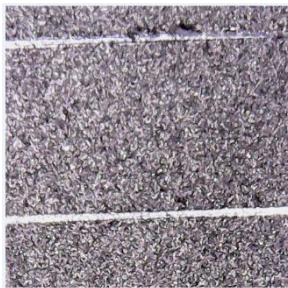

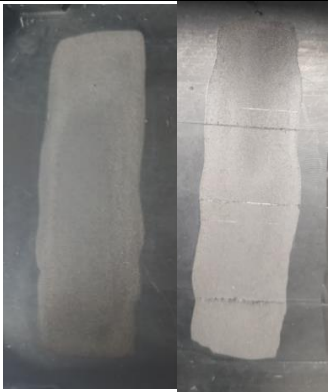
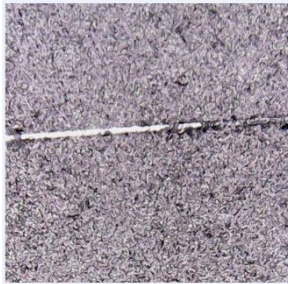

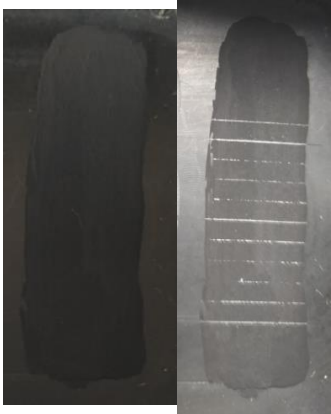
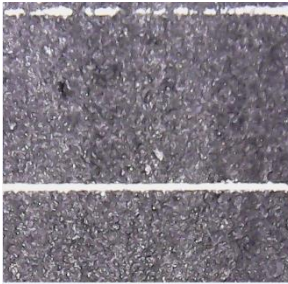
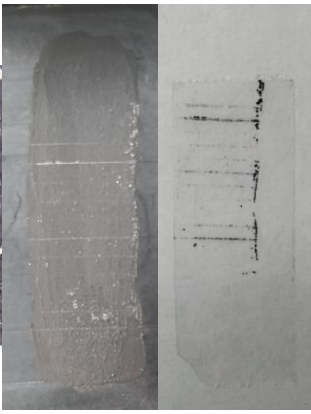





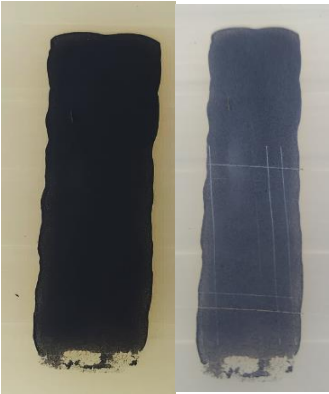
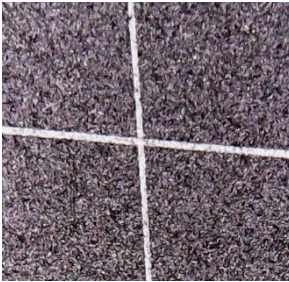




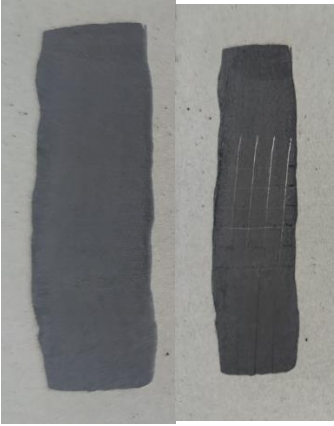
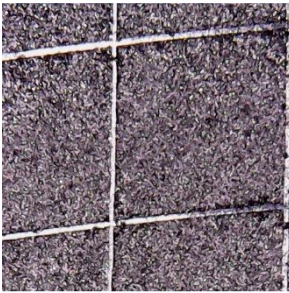
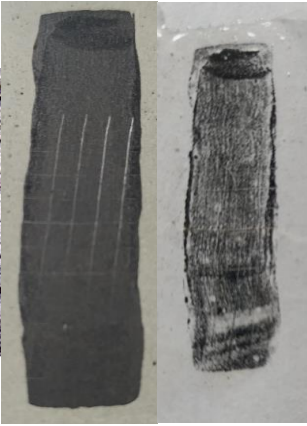
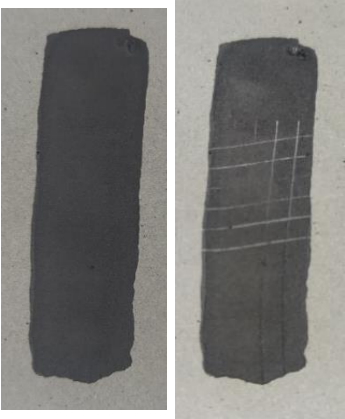
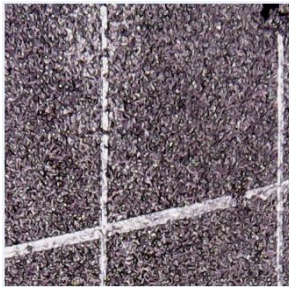
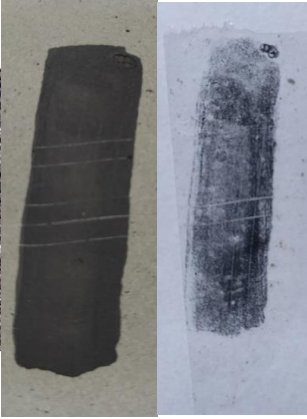
0B
Greater than 65 %

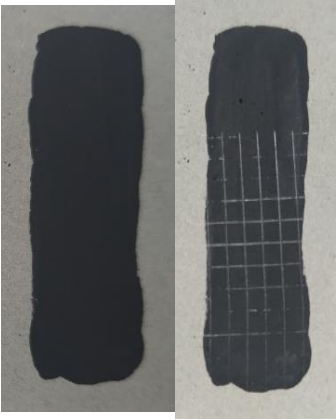
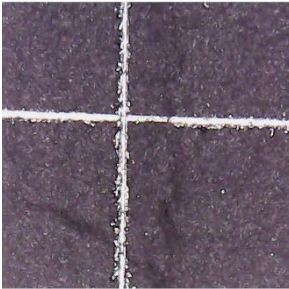
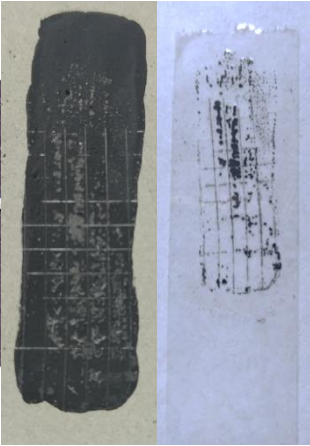




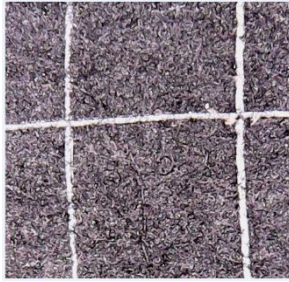

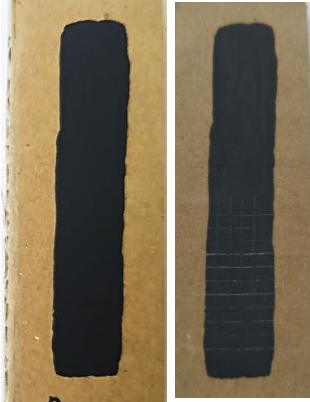
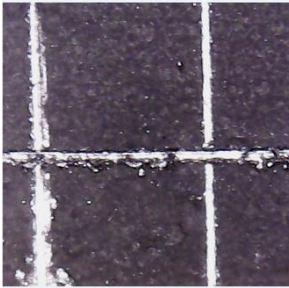

PBT (the case of dosimeter) + Base


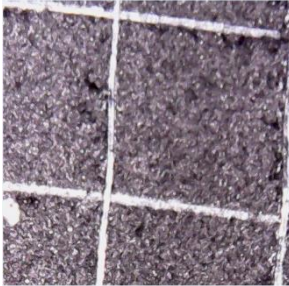
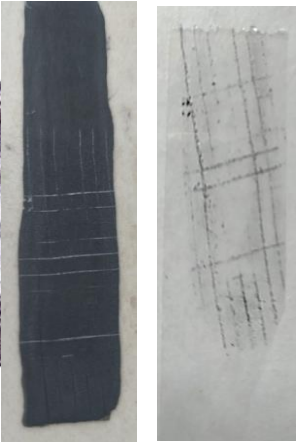

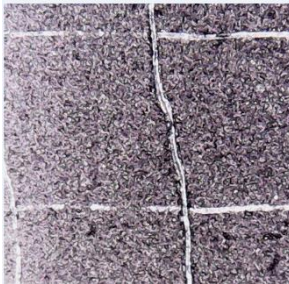
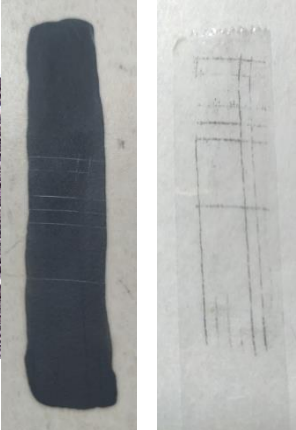
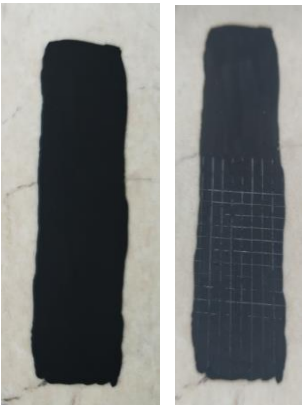
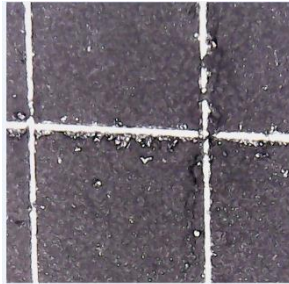
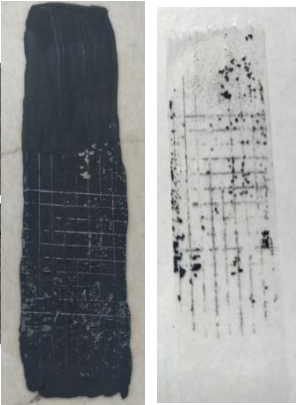


1B
35-65 %

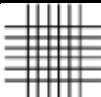
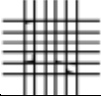
Polyacetal (the case of termal imager) + A				0B Greater than 65 %
Polyacetal (the case of termal imager) + B				0B Greater than 65 %
Polyacetal (the case of termal imager) + Base				4B Less than 5 %
Caprolone+A				5B 0 % None

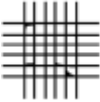
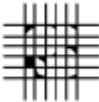
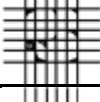
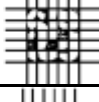
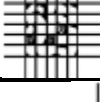
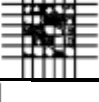
Caprolone + B				5B 0 % None
Caprolone + Base				4-5B 0 % None, Less than 5 %
Concrete+A				Exfoliate a thin top layer
Concrete+B				Exfoliate a thin top layer

Concrete+ Base				2B 15-35 %
Cardboard+A				0 % None, 4-5B Less than 5 %
Cardboard+ B				0 % None, 4-5B Less than 5 %
Cardboard+ Base				3B 5-15 %

Tile+A				4B Less than 5 %
Tile+ B				5B 0 % None
Tile+ Base				3B 5-15%

*Legend: Classification of Adhesion Test Results for Test Method.

CLASSIFICATION OF ADHESION TEST RESULTS		
CLASSIFICATION	PERCENT AREA REMOVED	SURFACE OF CROSS-CUT AREA FROM WHICH FLAKING HAS OCCURRED FOR SIX PARALLEL CUTS AND ADHESION RANGE BY PERCENT
5B	0 % None	
4B	Less than 5 %	

3B	5-15 %		
2B	15-35 %		
1B	35-65 %		
0B	Greater than 65 %	