## Supplementary Material

## **Experimental and Numerical Simulation Study of the Vibration Properties of Thin Copper Films Bonded to FR4 Composite**

## Sufyan A. Azam<sup>1,2,\*</sup> and Alex Fragoso<sup>2,\*</sup>

- <sup>1</sup> Department of Mechanical Engineering, Umm Al-Qura University, 21955 Makkah, Kingdom of Saudi Arabia; saazam@uqu.edu.sa
- <sup>2</sup> Departament d'Enginyeria Química, Universitat Rovira i Virgili, 43007 Tarragona, Spain; alex.fragoso@urv.cat



**Figure S1.** *Top*: Input signals recorded by the impact hammer. *Bottom*: Output signals recorded by accelerometers. All signals correspond to sample 3 of each group.



Figure S2a. Comparison of mode 1 shapes in all sample groups.



Mode 2

Figure S2b. Comparison of mode 2 shapes in all sample groups.



Figure S2c. Comparison of mode 3 shapes in all sample groups.



Figure S2d. Comparison of mode 4 shapes in all sample groups.

