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Study on a piezo-disk energy harvester excited by rotary magnets

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Highlights:

- A piezo-disk energy harvester excited by rotary magnets (PEHRM) is presented.
- Excitation force exerting on the piezo-disk is general periodic instead of harmonic.
- An analytical model for evaluating PEHRM under a general periodic force is built.
- Multiple speed ranges make PEHRM achieve peak and effective bandwidth is enhanced.
- Influence of the magnet number and excitation distance on PEHRM is obtained.

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