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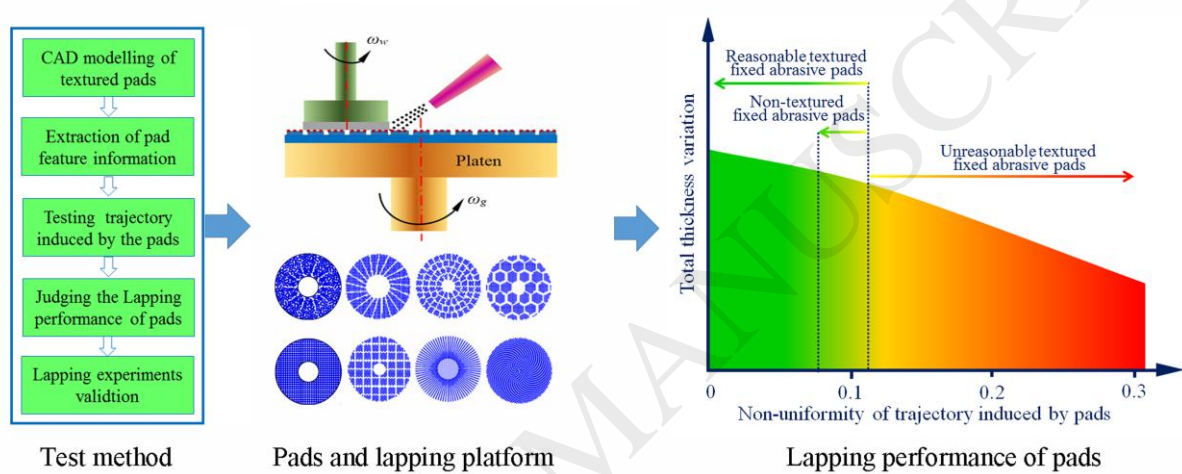
Study on geometrical patterns of textured fixed-abrasive pads in sapphire lapping based on trajectory analysis

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Graphical abstracts



Highlights

- Geometrical patterns govern the global distribution of abrasives on the pad surface, having an obvious influence on the lapping performance.
- A test method for evaluating the performance of geometrical patterns was proposed based on the pad modelling and trajectory analysis.
- The results validated the test method, the performance of pad geometrical patterns can be revealed by the non-uniformity of trajectory.
- The non-uniformity of trajectory could be either minimized (less than 0.1) or maximized (up to 0.3), depending on the geometrical patterns.

Abstract: Geometrical patterns of textured fixed-abrasive pads (T-FAPs) play a key role during the lapping or polishing process, which not only affect the fluid liquidity but also affect the global distribution of fixed abrasives located at the pad surface. However, the T-FAP performance caused by the changed abrasive distribution was seldom revealed and evaluated. As the trajectory distribution

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