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Chang et al.(10) **Pub. No.: US 2024/0213016 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **METHOD OF FORMING CONDUCTIVE
FEATURE INCLUDING CLEANING STEP**continuation of application No. 17/205,847, filed on
Mar. 18, 2021, now Pat. No. 11,670,499.(71) Applicant: **Taiwan Semiconductor
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Hsinchu (TW)(52) **U.S. Cl.**
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(2013.01); **H01L 21/76877** (2013.01)(21) Appl. No.: **18/598,322**(57) **ABSTRACT**(22) Filed: **Mar. 7, 2024**

A method of forming a semiconductor device includes forming a first conductive feature on a bottom surface of an opening through a dielectric layer. The forming the first conductive feature leaves seeds on sidewalls of the opening. A treatment process is performed on the seeds to form treated seeds. The treated seeds are removed with a cleaning process. The cleaning process may include a rinse with deionized water. A second conductive feature is formed to fill the opening.

Related U.S. Application Data(63) Continuation of application No. 18/309,298, filed on
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