

Water Washable Coatings for Plasma Dicing Processes

Matthew Day^a, Larry Sirois^b, Stuart Erickson^b, Allison Gray^c and John Moore^c

^aSPTS Technologies Ltd, Ringland Way, Newport, NP18 2TA UK

^bUltrasonic Systems, Inc., 135 Ward Hill Avenue, Haverhill, MA 01835 USA

^cDaetec, LLC, 4069 Calle Tesoro, Camarillo, CA 93012 USA

(jmoore@daetec.com, www.daetec.com)

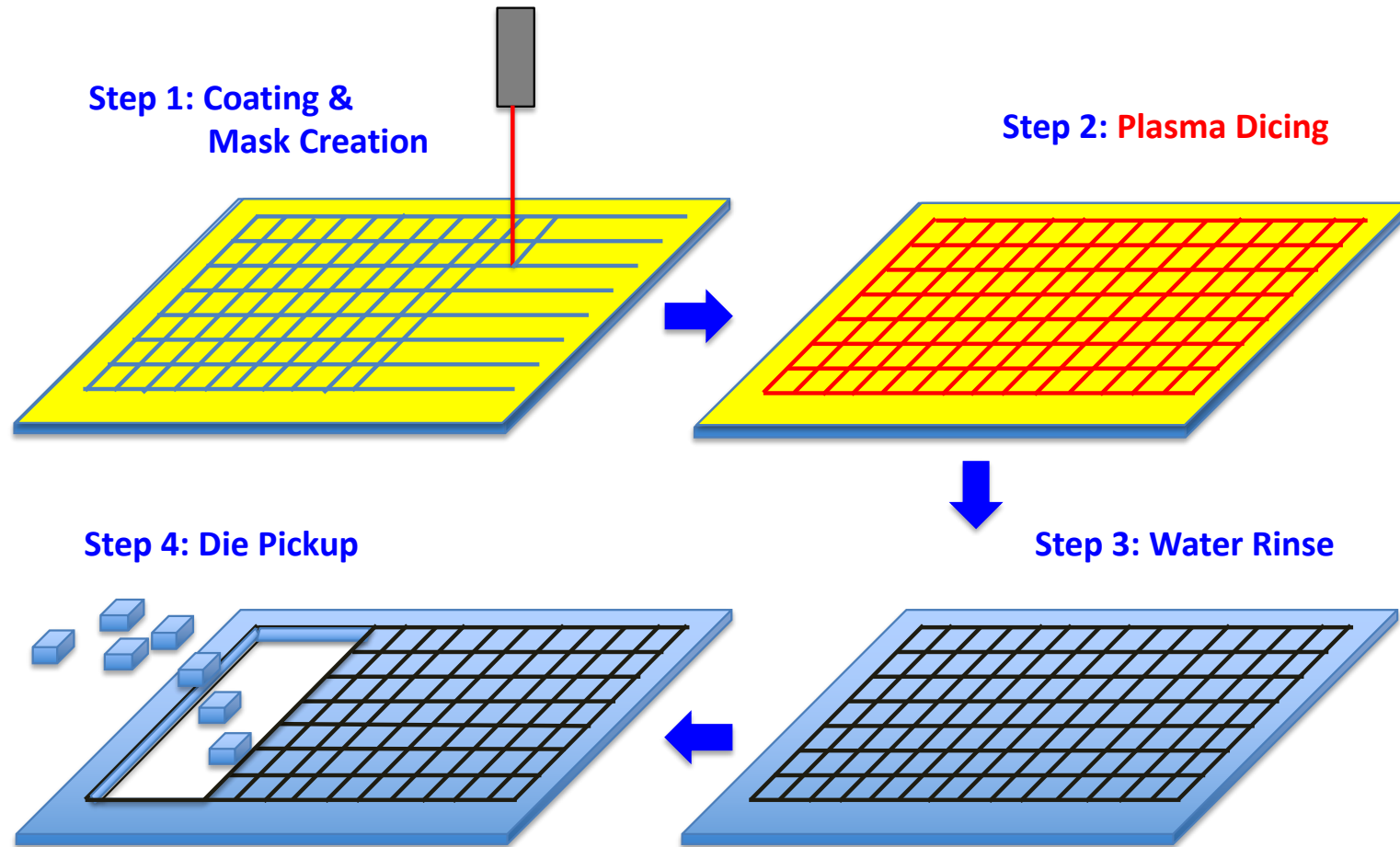


EPTC 2019

21st Electronics Packaging Technology Conference
December 4-6, 2019, Marina Bay Sands, Singapore

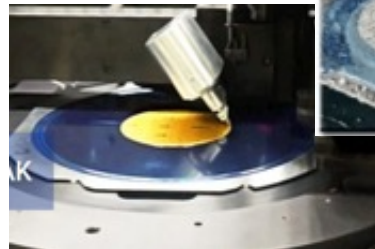
IEEE EPS Flagship Conference
In Asia Pacific Region

Introduction

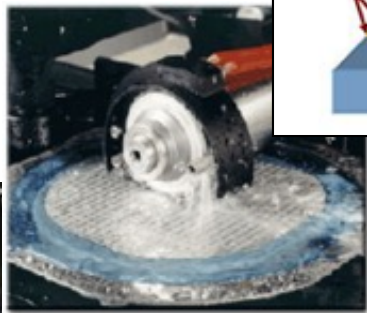


Benefits

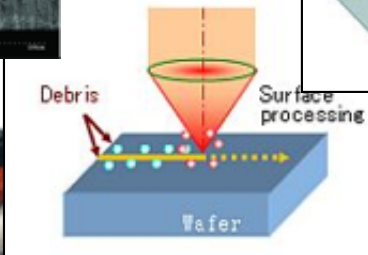
Conventional Dicing Techniques



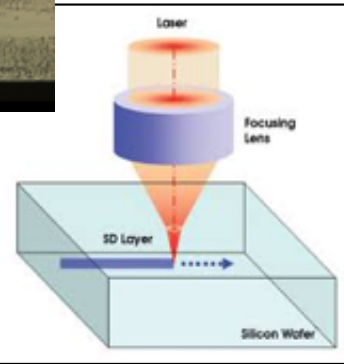
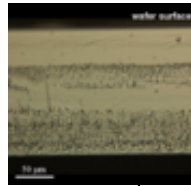
Cleaving



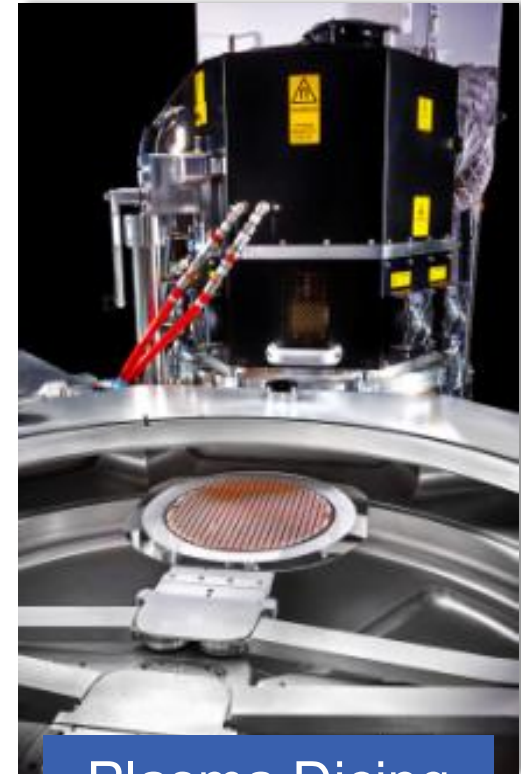
Blade



Laser



Stealth



Plasma Dicing



EPTC 2019

21st Electronics Packaging Technology Conference
December 4-6, 2019, Marina Bay Sands, Singapore

IEEE EPS Flagship Conference
In Asia Pacific Region

Benefits

- **Why Plasma dice?**

- Dicing lane for saw $\sim 80\mu\text{m}$
- Dicing lane for Plasma $\ll 30\mu\text{m}$
 - *Many more die per wafer (at small die sizes)*
- No chipping or vibration damage
- Shaped die
 - *Stronger die, higher dicing yields on thin substrates*
- Parallel Vs Serial process
 - *Wafers per hour not hours per wafer*

