

# IBM Almaden Research Center

## High Outgassing Resist

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# Almaden High Outgassing Resist

## Background

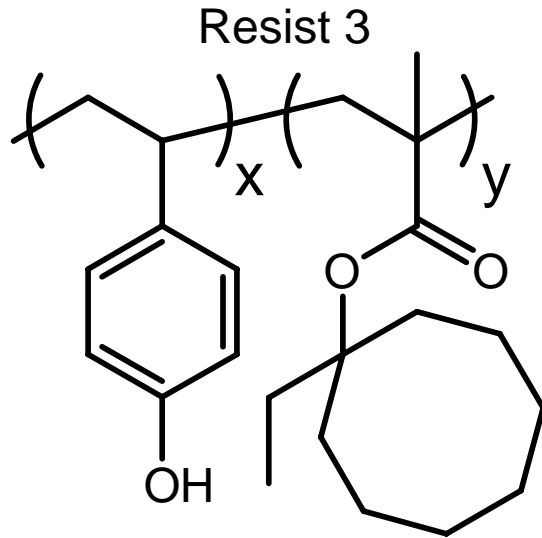
- First delivered to Greg Denbeaux in Fall 2007
- Efforts underway to raise outgassing flux 2-3X
  - Two new formulations immediately available for quick testing
  - Super High Outgasser 3; Super High Outgasser 4
- Resist will be rapidly scaled up pending successful outgassing test
- Formulations shipped to Greg Denbeaux last week

## Underlying Resist Design

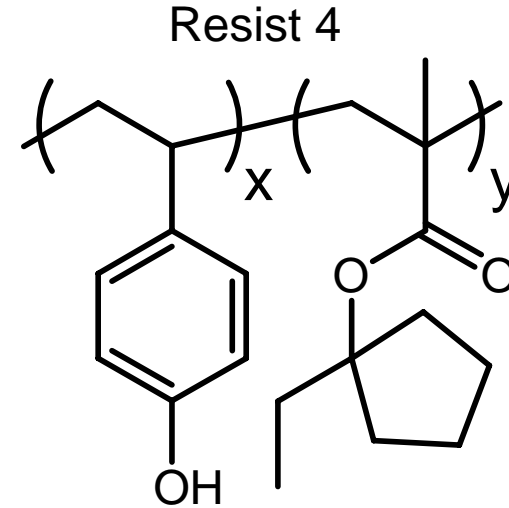
- ESCAP-style resist (Hydroxystyrene-cycloalkyl methacrylate copolymer)
- Low Activation ester chosen for finite room temperature ester deprotection
- Benzene-producing PAG used in high concentration; triflic acid generator
- High base loading used to maximize benzene generation prior to initiation of chain reaction
- High film thickness (> 120nm)



# Resists



ECOMA ESCAP



ECPMA ESCAP

## Formulations:

TPS-triflate: High Loading  
 Base: TBAH High Loading  
 Film thickness: 120nm

