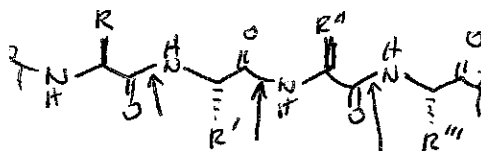


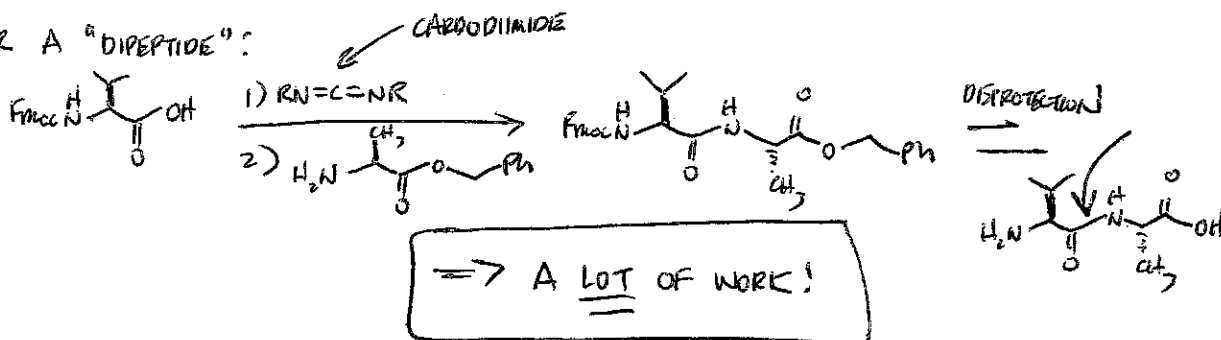
Submit notes to the Undergraduate Chemistry Office for posting.
PLEASE COMPLETE NOTES IN INK AND DO NOT STAPLE.

FINAL EXAM
 (CUMULATIVE)
 2:45 PM SUNDAY
 INGRAHAM B10

RECALL: PROFOUND CHEMICAL CHALLENGE =
 CHEMICAL SYNTHESIS OF PEPTIDES AND PROTEINS



FOR A "DIPEPTIDE":



- WHY IS SOLUTION-PHASE NOT IDEAL FOR PEPTIDE SYNTHESIS? PURIFICATION AWAY FROM UNDESIRABLE MATERIAL

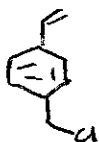
- MERFIELD - SOLID-PHASE SYNTHESIS

• ATTACH N-TERMINUS TO A "BEAD", THEN AFTER EACH STEP, WASH AWAY IMPURITIES

• SOLID "BEAD" = A POLYMER, BUILD PEPTIDE CHAIN ATTACHED

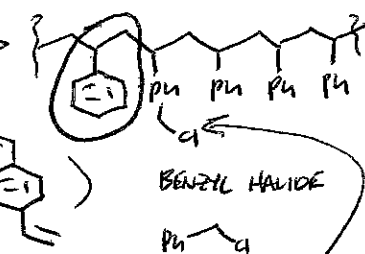
"SUPPORT"

POLYSTYRENE



"POLYMERIZE"

(CROSSLINK: $\text{C}_6\text{H}_4-\text{CH}_2-\text{Cl}$)



REACTIVE SITE

Submit notes to the Undergraduate Chemistry Office for posting.
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THUS,

1) Fmoc-NH-CH(R¹)-COOH, Na₂CO₃ (S_N2)
 2) Na₂CO₃

1) Fmoc-NH-CH(R²)-COOH, Na₂CO₃
 2) WASH

1) Fmoc-NH-CH(R³)-COOH, Na₂CO₃
 2) WASH

TRIPeptide-O-

THIS PROCESS CAN BE AUTOMATED

RALPH HIRSCHMANN

WE ARE NOT DONE WITH RESEARCH

CAREER PATHS IN CHEMISTRY

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    graph TD
      A[INTERESTED IN CHEMISTRY?] --> B[B.S. CHEMISTRY]
      B --> C[INDUSTRY (TECHNICIAN)]
      B --> D[GRADUATE SCHOOL]
      D -- 5-6 YEARS --> E[Ph.D.]
      D --> F[M.S.]
      E --> G[INDUSTRY]
      E --> H[ACADEMIC]
      H --> I[SMALL SCHOOL]
      H --> J[MID-LEVEL UNIVERSITY]
    
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