

Mühendislik Fakültesi



Kimya Mühendisliği Bölümü

KMB322-Polimer Kimyası ve Teknolojisi

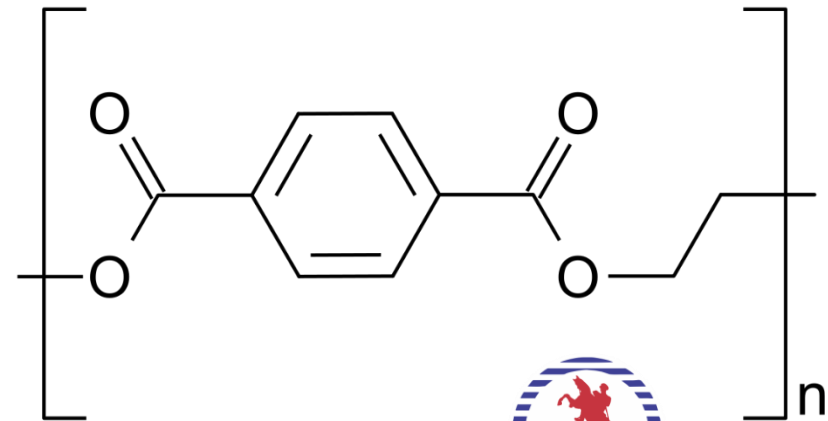
Dr. Öğr. Üyesi, İsa DEĞİRMENCI

Poliesterler

KMB322-Polimer Kimyası ve Teknolojisi

Hafta-3





Basamaklı Polimerizasyon (Kondensasyon Polimerizasyonu)

Kondensasyon tepkimesi: Fonksiyonel grupları bulunan iki molekülün, küçük bir molekülü yan ürün verecek biçimde gerçekleştirdikleri birleşme tepkimesi.

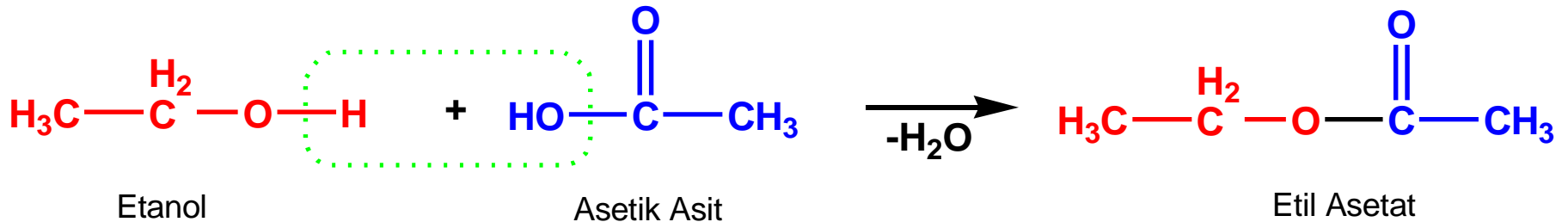
Fonksiyonel gruplar : -OH, -COOH, -COCl, -NH₂

Yan ürünler: H₂O, HCl, NH₃ gibi.

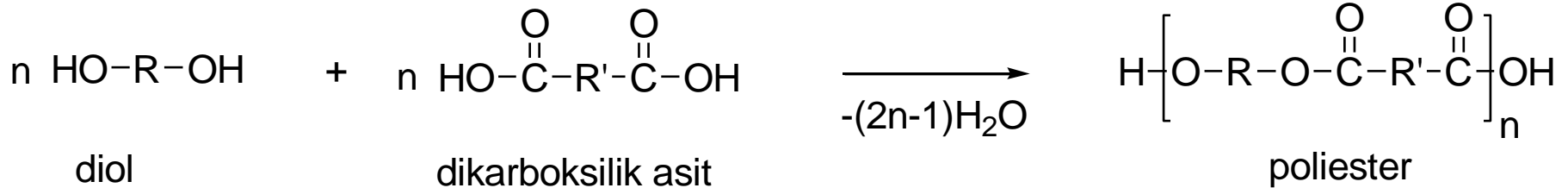
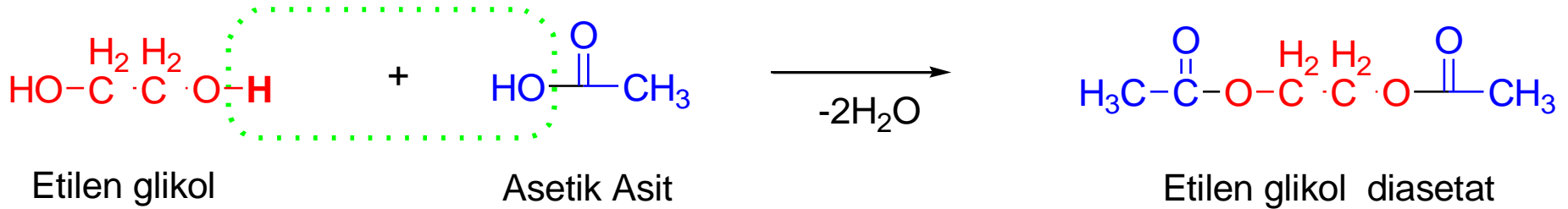


Basamaklı Polimerizasyon

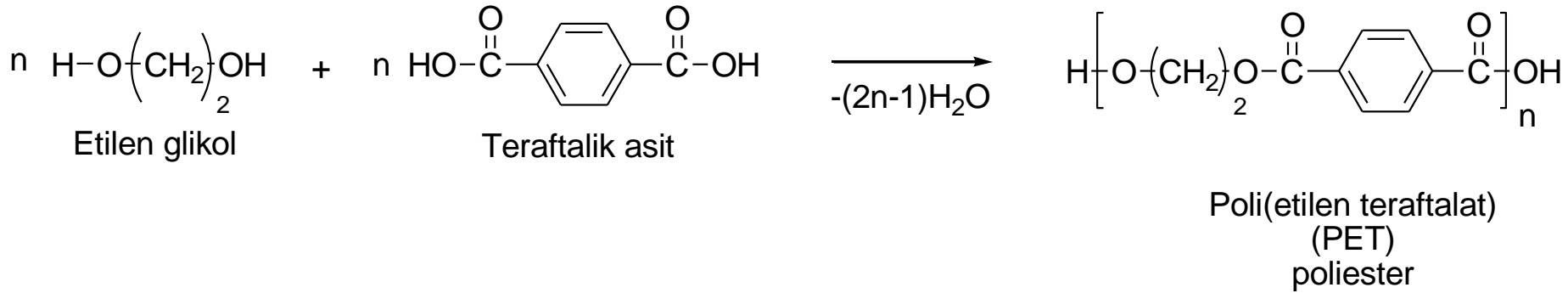
Tek fonksiyonel moleküllerle kondensasyon tepkimesi



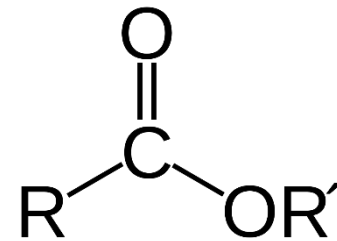
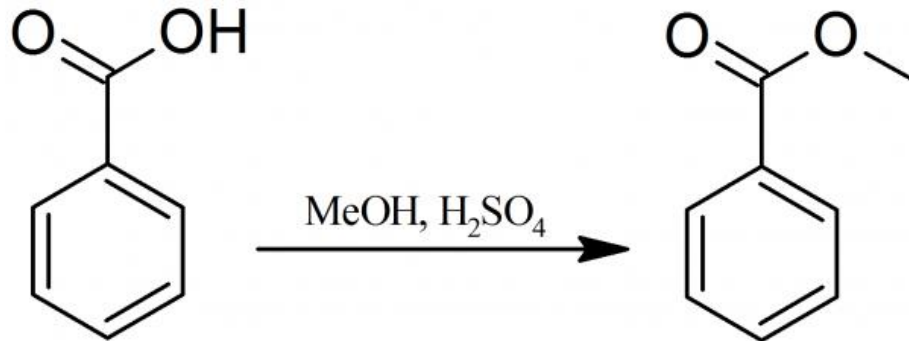
Basamaklı Polimerizasyon



PET Sentezi



Fischer Esterifikasyonu





Polietilen Teraftalat'ın özellikleri

İlk üretilen sentetik liflerdendir.

Lif özelliği nedeniyle tekstil endüstrisinde tercih edilir.

Mekanik özellikleri (Germe – Gevşeme(uzama)) iyidir.

Boyanabilirliği iyidir.

Kalıcı boyanabilme.



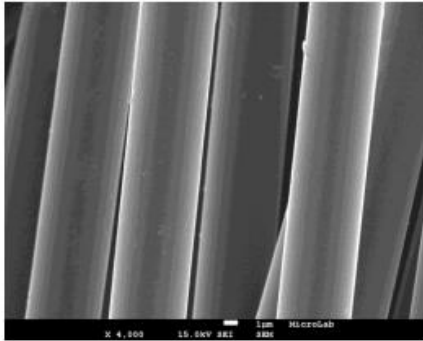


Fig.7 - SEM image of Carbon fibre treated with a 4M solution of HNO_3

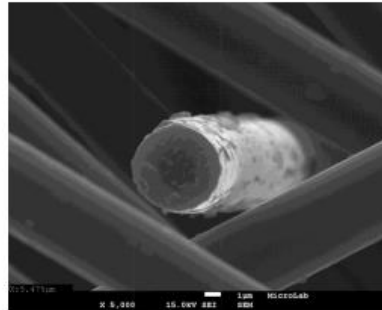
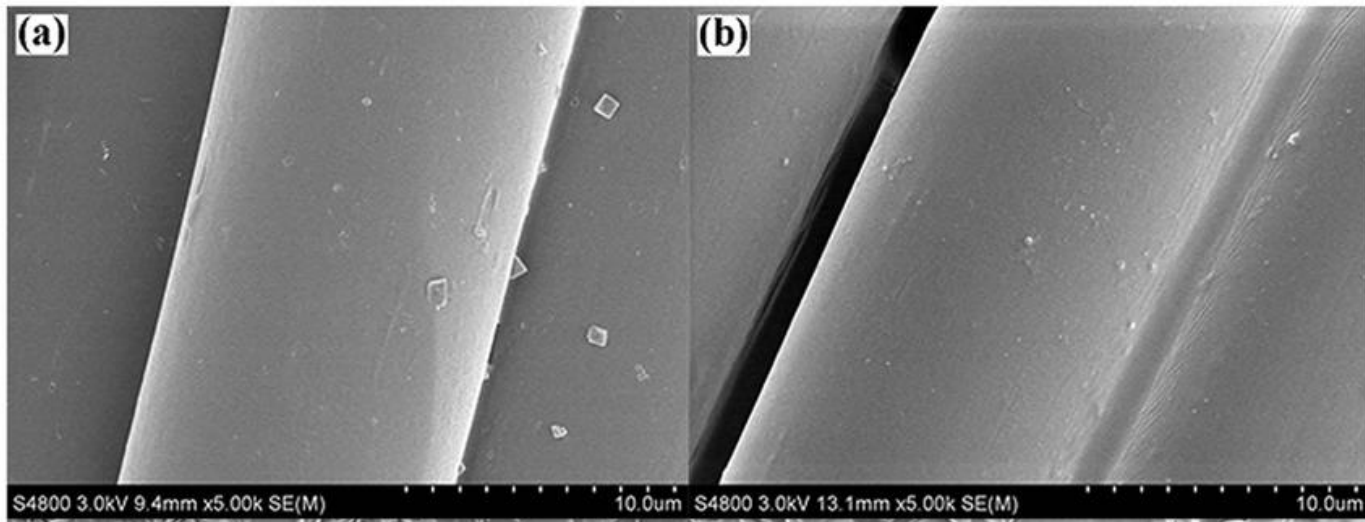


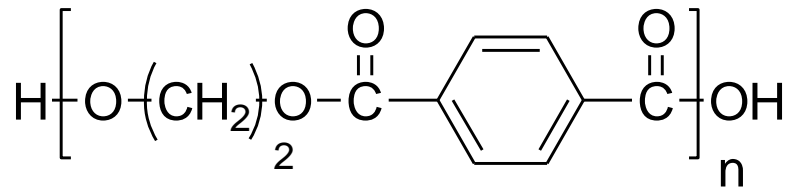
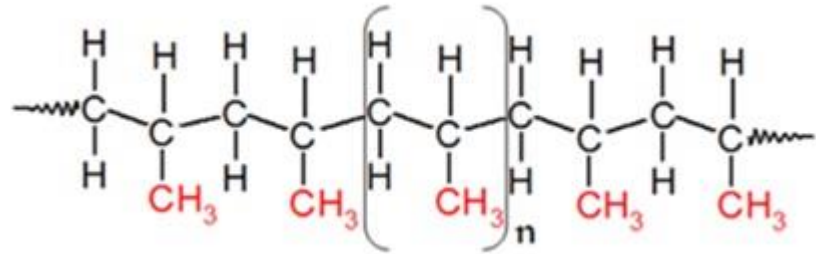
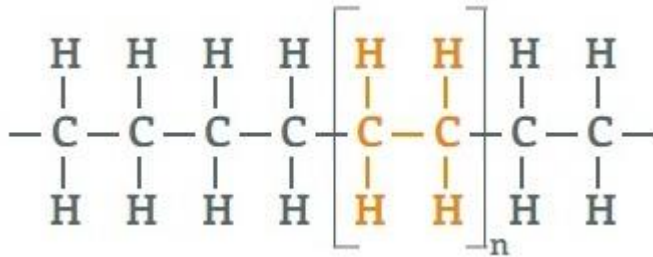
Fig.8- SEM image of Carbon fibre with the diameter measured

Recycling of Carbon Fibres From Epoxy Composites.

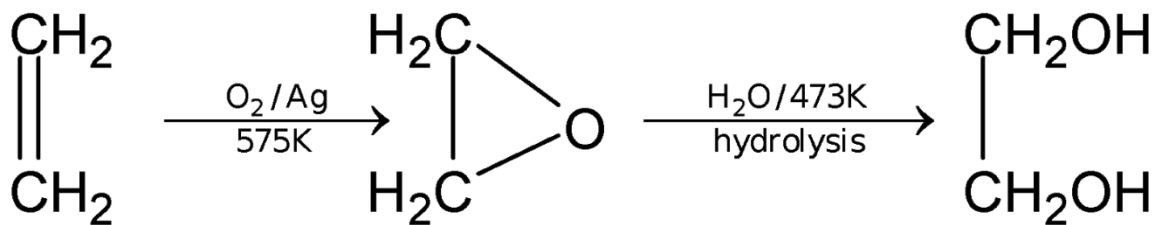
João Pedro dos Santos Carvalho Department of Chemical Engineering, Instituto Superior Técnico



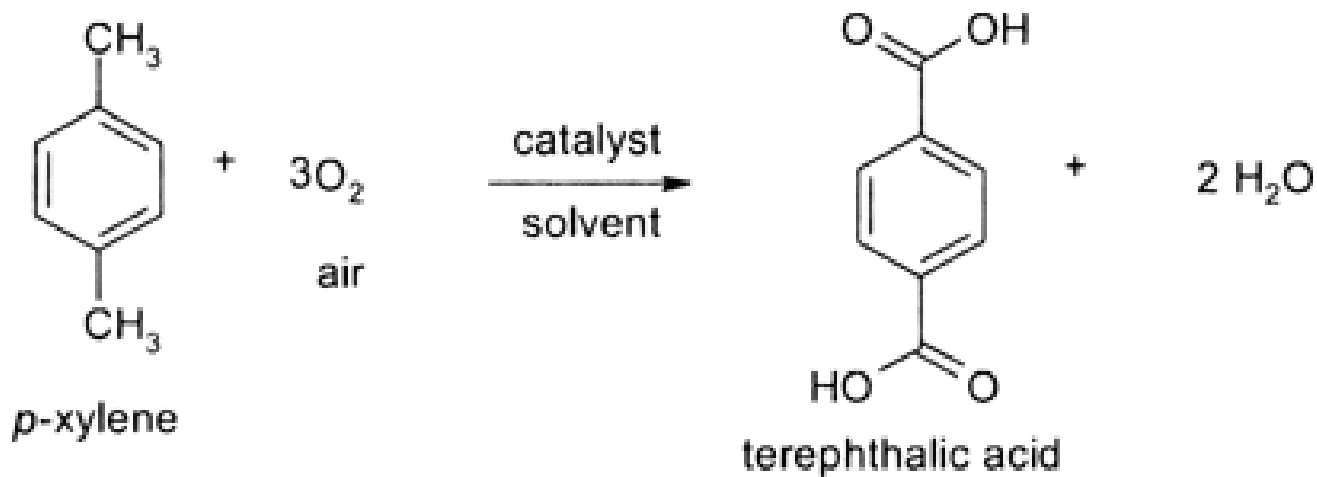
Boyanabilirlik Kıyaslaması



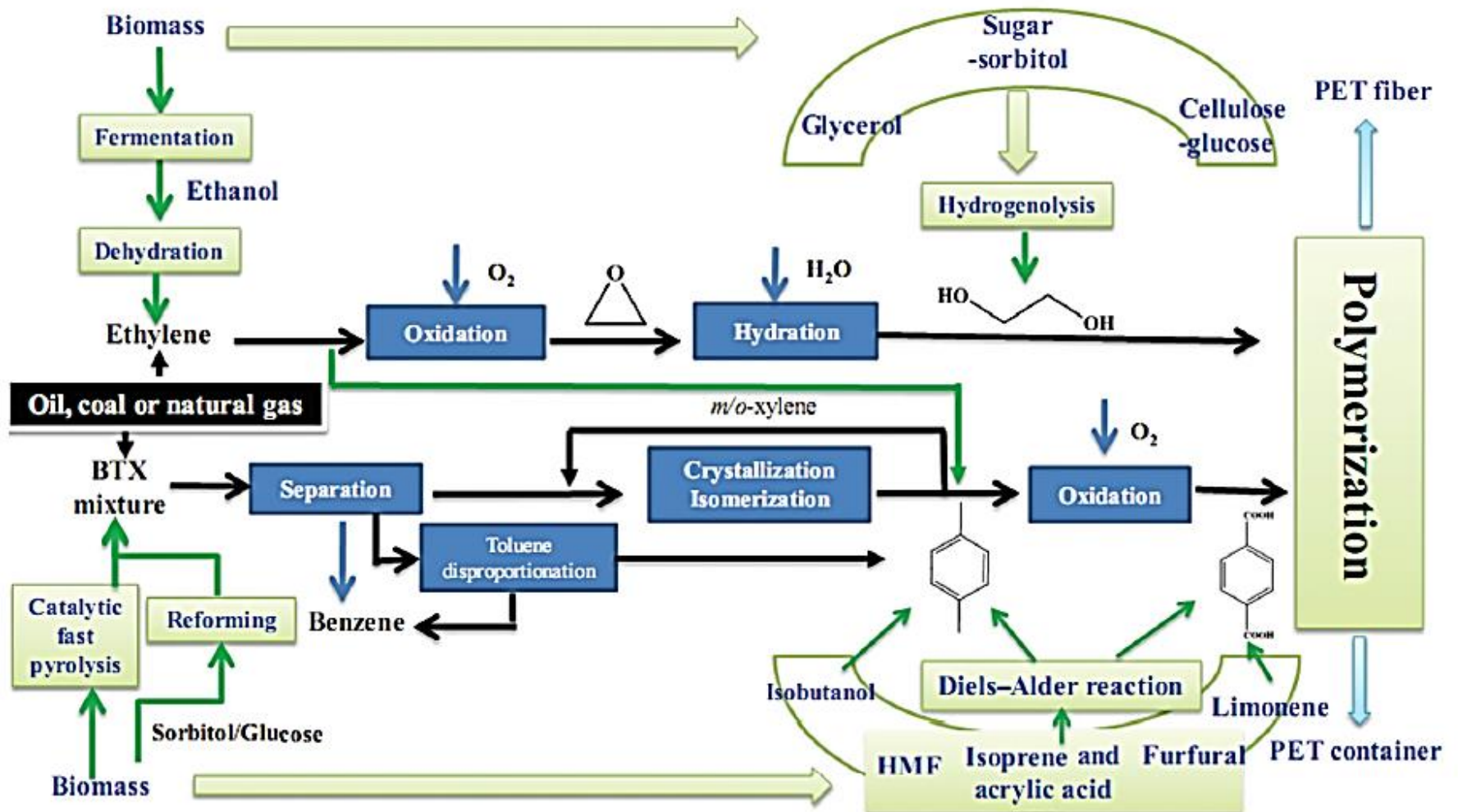
Poli(etilen tereftalat)
(PET)
poliester



Ethylene epoxide
or oxirane



PET Monomerlerinin Doğadan Elde Edilmesi



Dimetil Teraftalat'dan

