

**COVER STORY**  
**PESTICIDES  
AND  
PARKINSON'S**

Molecular and epidemiological sleuths investigate the connection between crop-protecting chemicals and Parkinson's disease. **PAGE 11**

**QUOTE  
OF THE WEEK**  
"Sometimes  
you have to  
take intellectual  
risks to advance  
science."

PRATIBHA GAI,  
JEOL PROFESSOR OF  
ELECTRON MICROSCOPY,  
UNIVERSITY OF  
YORK **PAGE 32**

- 5 NEWS OF THE WEEK**  
**NEW ACS PRESIDENT-ELECT**  
Petition candidate Diane Grob Schmidt wins this year's vote; four board members are also chosen.
- 6 PHARMA SERVICES GIANT AWAKENS**  
DSM, Patheon merger creates a one-stop shop for fine chemicals, finished products.
- 6 IMPROVING DRUG SAFETY**  
Bill on President Obama's desk aims to ensure the safety, traceability of prescription drug supply.
- 7 CANCER PROTEIN STOPPED IN TRACKS**  
Inhibitor of disease-associated Ras protein could lead to cancer therapies.
- 7 DISMANTLING SYRIA'S TOXIC ARSENAL**  
Just where the arms and precursors will be destroyed is unknown—but their removal is set.
- 8 CHEMOTHERAPY SANS ANTIBIOTICS**  
Gut bacteria levels affect efficacy of cancer drugs in mice, with low levels crimping effectiveness.
- 8 LOWERING BIOFUELS TARGETS**  
EPA proposes reduced renewable fuels targets; oil and biofuels industries object for opposite reasons.
- 9 CROSS-COUPLING GOES GREEN**  
Water-based technique makes the widely used Suzuki-Miyaura cross-coupling reaction even more versatile.
- 9 GENOMICS PIONEER DIES**  
Two-time Nobel Laureate Frederick Sanger helped spark a life sciences renaissance.

**BUSINESS**  
**16 CONCENTRATES**

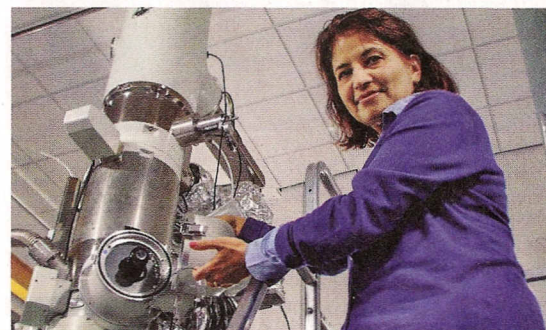
- 18 BUILDING A BETTER LACTIDE**  
Two biobased chemical firms take different approaches to lactic acid derivatives.
- 20 CHEMICALS MAKE A COMEBACK AT BP**  
New acetic acid process and dehydration technology may breathe life into the firm's chemical business.

**GOVERNMENT & POLICY**

- 22 CONCENTRATES**
- 24 CAPTURING CARBON TO SAVE COAL**  
Coal advocates search for a way to make an expensive, young emissions mitigation technology attractive.

**SCIENCE & TECHNOLOGY**

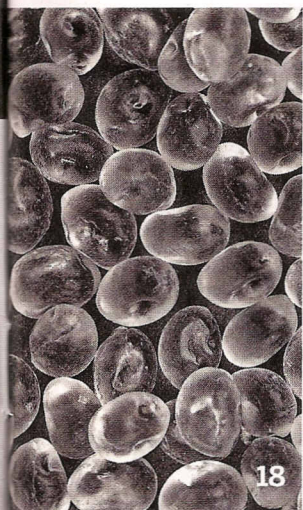
- 26 CONCENTRATES**
- 28 FIGURING OUT ENZYMES**  
Enzyme Function Initiative develops tools to determine what specific protein sequences actually do.



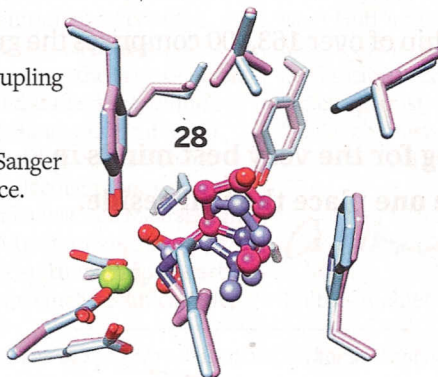
- 32 PRATIBHA GAI ▲**  
C&EN talks with a prizewinning microscopist who watches "live" reactions.

**THE DEPARTMENTS**

- 3 EDITOR'S PAGE**
- 4 LETTERS**
- 34 ACS NEWS**
- 36 CLASSIFIEDS**
- 40 NEWSSCRIPTS**



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COVER: Exposure to the pesticides paraquat (top left) and rotenone, shown with an artistic rendition of a nerve cell junction, has been associated with the development of Parkinson's. Shutterstock/C&EN