

## PUBLICATIONS:

A Fluoregenic Peptide Containing the Processing Site of Human SARS Corona Virus S-Protein: Kinetic Evaluation and NMR Structure Elucidation, Basak, A., Mitra, A., Basak, S., Pasko, C., Chretien, M., Seaton, P. *ChemBioChem*, **2007**, 8, 1 – 10.

The Critical Distance for the Cycloaromatization Reactions of Eneidyne. Capitani, Joseph F., Gaffney, Shannon M., Castaldo, Lyana, Mitra, Abhijit *Current Topics in Medicinal Chemistry*, **2006**, Accepted.

Understanding Biology at the Molecular Level, Mitra Abhijit, *ChemBioChem*, **2006**, 7, 1467-1468.

*N*-(2-Aminobenzyl)-*N,N*-bis(quinolin-2-ylmethyl)amine. Mitra, Abhijit, Seaton, Pamela J., Wheeler, Kraig *Acta Cryst. C62*, **2006**, 581-582.

Differential Gene Expression of Sulindac® Treated Human Breast Epithelial Cells. Roy, Debashish, Panda, Achinta; Calaf, G.M.; Mitra, Abhijit *International Journal of Oncology*, **2005**, 27 (6), 1727.

Critical Distance Model for the Energy of Activation of the Bergman Cyclization of Eneidyne. Gaffney, Shannon M.; Capitani, Joseph F.; Castaldo, Lyana; Mitra, Abhijit *International Journal of Quantum Chemistry*, **2003**, 95(6), 706-712.

New Silyl Ether Reagents for the Absolute Stereochemical Determination of Secondary Alcohols. Williamson, R. Thomas; Sosa, Ana C. Barrios; Mitra, Abhijit; Seaton, Pamela J.; Weibel, Douglas B.; Schroeder, Frank C.; Meinwald, Jerrold; Koehn, Frank E. *Organic Letters*, **2003**, 5(10), 1745-1748

An Expedient Approach to Internally Functionalized Chiral Dendrimers: Synthesis of a Dendritic Molecule Incorporating Furanoside Skeleton, Mitra, Abhijit; Ghorai, S.; Bhattacharjya, A; Basak, A.; Williamson, R.T. *J. Org. Chem.*, **2003**, 68(2), 617-620.

Synthesis of Quinolines and their Characterization by 2D NMR Spectroscopy  
Mitra, Abhijit; Seaton, P.J.; Assarpour, Ali; Williamson, R. T. *J. Chem. Ed.* , **2002**, 79, 1, 106 - 110.

Unprecedented Concentration Dependent Chemical Shift Variation in <sup>1</sup>H-NMR Studies: A Problem in Structure Elucidation and the Study of Molecular Recognition, Mitra, Abhijit; Seaton, P. J.; Capitani, J.F.; Assarpour, Ali *J. Indian Chem. Soc.*, **1998**, 75, 823-830.

Unprecedented Concentration Dependent Chemical Shift Variation in <sup>1</sup>H-NMR Studies: A Caveat in the Investigations of Molecular Recognition and Structure Elucidation, Mitra, Abhijit; Seaton, P. J.; Assarpour, Ali; Williamson, R. T. *Tetrahedron* , **1998**, 54, 15489-15498

A Mild Method for Selective Cleavage of Tetrahydropyranyl Ethers in the Presence of Other Acid Labile Functionalities. Nambiar, K.P.; Mitra, Abhijit *Tetrahedron Lett.*, **1994**, 35, 9, 3033-3036.

A PM3 Study of the Critical Distance Factor in the Activation/Cyclization of Selected Neocarzinostatin Analogs. Mitra, Abhijit; Capitani, Joseph *Intn. J. Quantum Chem.*, **1994**, 49, 363-369.

A Highly Stereoselective Synthesis of the C<sub>18</sub>-Cecropia Juvenile Hormone. Still, W. Clark; McDonald, J.H.; Column, D.B.; Mitra, Abhijit *Tetrahedron Lett.* , **1979**, 593.

Rapid Chromatographic Technique for Preparative Separations with Moderate Resolution. Still, W. Clark; Kahn, Michael; Mitra, Abhijit *J. Org. Chem.*, **1978**, 43, 2923.

1,2 and 1,4 Addition of Group IVA Anions to 2-Cyclohexenones. Kinetic and Thermodynamic Control. W. Clark Still; Abhijit Mitra, *Tetrahedron Lett.*, **1978**, 2659.

A Highly Stereospecific Synthesis of *Z*-Trisubstituted Olefins via 2,3-Sigmatropic Rearrangement. Preference for a Pseudoaxially Substituted Transition State, Still, W. Clark; Mitra, Abhijit *J. Am. Chem. Soc.*, **1978**, 100, 1927.

## PATENTS

1. DDT FREE 1,1-Bis(chlorophenyl)-2,2,2-tri-chloroethanol, U.S. 84-049B, **1984**, Nichols, Richard Walter; Zabrodski; William Joseph; Mitra, Abhijit. (Rohm and Haas Co., USA).

2. Process for Reducing the Amount of DDT-related Impurities in 1,1-Bis(Chlorophenyl)-2,2,2-Trichloroethanol, # 91306349.1- European Patent, **1991**, Nichols, Richard Walter; Zabrodski, William Joseph; Mitra, Abhijit (Rohm and Haas Co., USA).
3. Process for removal of DDT-related impurities from dicofol. Nichols, Richard Walter; Zabrodski, William Joseph; Mitra, Abhijit. (Rohm and Haas Co., USA). Eur. Pat. Appl. **1991**, 22 pp. CODEN: EPXXDW EP 460977 A1 19911211 Designated States R: AT, BE, CH, DE, FR, GB, LI, NL. Patent written in English. Application: EP 86-91306349 19860610. CAN 117:26066 AN 1992:426066.

#### Patent Family Information

Patent No.	Kind	Date	Application No.	Date
EP 460977	A1	19911211	EP 1991-306349	19860610

R: AT, BE, CH, DE, FR, GB, LI, NL

#### Priority Application

EP	<b>1991-306349</b>	19860610
----	--------------------	----------

4. Process for the removal of DDT-related impurities by extraction from 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (dicofol, a miticide). Nichols, Richard W.; Zabrodski, William J.; Mitra, Abhijit. (Rohm and Haas Co., USA). U.S., **1987**, 9 pp. Cont.-in-part of U.S. Ser. No. 783,392, abandoned. CODEN: USXXAM US 4705902 A

**1987** 1110 Patent written in English. Application: US 86-862001 19860515. Priority: US 85-740618 19850603; US 85-783392 19851003. CAN 108:186310 AN 1988:186310

#### Patent Family Information

Patent No.	Kind	Date	Application No.	Date
US 4705902	A	19871110	US 1986-862001	19860515
BR 8602543	A	19880202	BR 1986-2543	19860602
IL 78984	A1	19900118	IL 1986-78984	19860602
EP 248954	A1	19871216	EP 1986-304437	19860610
EP 248954	B1	19920401		

R: AT, BE, CH, DE, FR, GB, LI, NL

AT 74342	E	19920415	AT 1986-304437	19860610
----------	---	----------	----------------	----------

#### Priority Application

US	<b>1985-740618</b>	A3	19850603
US	<b>1985-783392</b>	A2	19851003
EP	<b>1986-304437</b>		19860610
US	<b>1986-862001</b>	A	19860515

## CONFERENCES, LECTURES and PRESENTATIONS:

*Non-covalent interactions in heteroaromatic molecules.* Prantik Kundu, , Joseph F. Capitani, Abhijit Mitra, Pamela J. Seaton, 233<sup>nd</sup> ACS National Meeting, Chicago, IL, United States, Mar. 25-29, **2007**, ORGN-197. Publisher: American Chemical Society, Washington, D.C.

*Concentration Dependent Chemical Shifts in NMR Spectra of Indoles.* Seaton, P., Mitra A, 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, United States, Sept. 10 -14, **2006**, ORGN-926. Publisher: American Chemical Society, Washington, D.C.

*$\pi$ - $\pi$  Interactions in Heterocyclic Molecules.* Mitra A, Capitani J.F., Kundu, P. Bergonzo, C., Bartolotti, L., Seaton, P., 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, United States, Sept. 10 -14, **2006**, ORGN-825. Publisher: American Chemical Society, Washington, D.C.

*Synthesis and NMR characterization of tethered quinolines,* Adam J. Beck, Pamela J. Seaton, and Abhijit Mitra, Oral Presentation, ACS National Meeting, Atlanta GA, March 2006. Abstract no. ORGN. 544.

*$\pi - \pi$  Interaction in Chemistry and Biology*, Pamela J. Seaton, Ajoy Basak, Joseph F. Capitani, Abhijit Mitra, Oral Presentation, International Chemical Congress, Dec. 2005, Abstract no. 2011.

*"Synthesis and Characterization of Aromatic Heterocyclic Triamines"* Abhijit Mitra and Pamela J. Seaton, Oral Presentation, 229<sup>th</sup> ACS National Meeting, San Diego, CA, March 2005. Abstract no. ORGN 21.

*"Synthesis, NMR and X-Ray Characterization of Diquinaldine Benzylamine Derivatives"* Pamela J. Seaton, Abhijit Mitra, Wei Gan, Robert Hancock and Ajoy Basak, Oral Presentation, 227<sup>th</sup> ACS National Meeting, Anaheim, CA, March 2004. Abstract no. 205.

*"Design and Synthesis of Fluorescent Ligands to act as Sensors for Zinc"*, Pamela J. Seaton, Wei Gan, Darren Melton, Robert Hancock, S. Bart Jones and Abhijit Mitra, Oral Presentation, ACS Southeast Regional Meeting, Atlanta GA, November, 2003

*"Shielding Effects in Organic Chemistry, Friend or Foe?"* Abhijit Mitra, P.J. Seaton, R.T. Williamson, Poster, 39<sup>th</sup> IUPAC Congress and the 86<sup>th</sup> Conference of the Canadian Society for Chemistry, August, 2003. Abstract no. PH.3.P048

*"Concentration Dependent Chemical Shift Variation in NMR Spectra"*, P. J. Seaton, Abhijit Mitra, R.T. Williamson, Oral Presentation, 225<sup>th</sup> ACS National Meeting, New Orleans LA, March 2003. Abstract no. 292

*"Concentration Dependence of  $^1\text{H}$ - $^1\text{H}$  Spin Spin Coupling Constants: Fact or Fiction"*: Abhijit Mitra, P.J. Seaton, R.T. Williamson, Oral Presentation, 225<sup>th</sup> ACS National Meeting, New Orleans LA, March 2003, Abstract no. 293.

*"Chromatography and UV-Visible Spectroscopy of Paprika Pigments and Oils, an Introductory and Advanced Organic Lab"*, Abhijit Mitra, and P.J. Seaton, Oral Presentation, 223<sup>rd</sup> ACS National Meeting, Orlando Florida, April, 2002, Abstract no. CHED-1193.

*"Structure, Intermolecular Forces and Properties"*, Abhijit Mitra, and P.J. Seaton, Oral Presentation, 223<sup>rd</sup> ACS National Meeting, Orlando Florida, April, 2002, CHED-1190.

*"Unprecedented Concentration Dependence of Chemical Shift Changes in NMR Spectra IX: A Problem in Structure Elucidation"*, Pamela J. Seaton, Joseph F. Capitani, Abhijit Mitra, Oral Presentation, 221<sup>th</sup> ACS National Meeting, Apr.1-5, 2001, San Diego, CA, Abstract no. ORGN 711.

*"Structure: Intermolecular Forces and Solubility"*, Pamela J. Seaton, Abhijit Mitra, Oral Presentation, 221<sup>th</sup> ACS National Meeting, Apr.1-5, 2001, San Diego, CA, Abstract no. CHED 131.

*"Characterization of Simple Heterocyclic Compounds by NMR Spectroscopy"*, P.J. Seaton & Abhijit Mitra, Oral Presentation, 219<sup>th</sup> ACS National Meeting, Mar. 26-30, 2000, San Francisco, CA, Abstract no. CHED 967.

*"Unprecedented Proton Chemical Shift Changes: NMR Characterization of Quinoline  $\pi$ - $\pi$  Stacking Interactions in Organic Solvents"*, R. Thomas Williamson, Abhijit Mitra, P.J. Seaton, J.F. Capitani, Oral Presentation, 219<sup>th</sup> ACS National Meeting, Mar. 26-30, 2000, San Francisco, CA, Abstract no. ORGN 84.

*"Theoretical Critical Distance Model For The Energy Of Activation In The Bergman Cyclization Of Eneidyne"*, J.F. Capitani & Abhijit Mitra, Oral Presentation, 219<sup>th</sup> ACS National Meeting, Mar. 26-30, 2000, San Francisco, CA, Abstract no. ORGN. 507

*"Unprecedented Concentration Dependent Chemical Shift Variation in  $^1\text{H}$  and  $^{13}\text{C}$  NMR Studies: A Problem in Structure Elucidation"*, Abhijit Mitra, J.F. Capitani, A. Assarpour, R.T. Williamson, P.J. Seaton, Oral Presentation, 219<sup>th</sup> ACS National Meeting, Mar. 26-30, 2000, San Francisco, CA, Abstract no. ORGN 512.

*"A Theoretical Critical Distance Model for the Energy of Activation in the Bergman Cyclization of Eneidyne"*, Joseph F. Capitani; Abhijit Mitra, Oral Presentation, 50<sup>th</sup> ACS Southeastern Regional Meeting, 1998, Research Triangle Park, NC. Abstract no. 509. Special symposium to honor Prof. Robert G. Parr.

*"Synthesis of Substituted Quinolines and their Identification by 1D/2D Proton NMR Spectroscopy"*, P.J. Seaton & Abhijit Mitra, Oral Presentation, 50<sup>th</sup> ACS Southeastern Regional Meeting, 1998, Research Triangle Park, NC Abstract no. 151.

*"Synthesis, NMR Characterization and Antibiotic Activity of Aminoquinoline Derivatives,"* Seaton, Abhijit Mitra, Capitani & Shea. Presentation at the 50<sup>th</sup> ACS Southeastern Regional Meeting, 1998, Research Triangle Park, NC. Abstract no. 64.

*"Unprecedented Concentration Dependent Chemical Shift Variation in NMR Studies: A Problem in Structure Elucidation,"* Abhijit Mitra, P.J. Seaton, J.F. Capitani, A. Assarpour, Oral Presentation, 217<sup>th</sup> National Meeting of the American Chemical Society, Mar. 21-25, 1999, Anaheim, CA. Abstract no. ORGN 351.

*"A Theoretical Critical Distance Model for the Energy of Activation in the Bergman Cyclization of Eneidyne,"* Capitani; Abhijit Mitra, Oral Presentation, 217<sup>th</sup> ACS National Meeting, Mar. 21-25, 1999, Anaheim, CA. Abstract no. ORGN 197.

*"Synthesis, NMR Characterization and Antibiotic Activity of Aminoquinoline Derivatives,"* Seaton, Abhijit Mitra, Capitani & Shea. Abstract no. ORGN 346. Oral Presentation, 217<sup>th</sup> ACS National Meeting, Mar. 21-25, 1999, Anaheim, CA.

*"Synthesis of Substituted Quinolines and their Identification by 1D/2D Proton NMR Spectroscopy,"* Seaton & Abhijit Mitra, Oral Presentation, 217<sup>th</sup> ACS National Meeting, Mar. 21-25, 1999, Anaheim, CA. Abstract no. CHED 841.

*"Concentration Observed in the Chemical Shifts of Aromatic and Other Protons,"* Abhijit Mitra; P.J. Seaton, Oral Presentation, Abstract no. ORGN 355, 213<sup>th</sup> ACS National Meeting, San Francisco, USA, April 1997.

*"Concentration Dependent Chemical Shift Changes: A Structure Elucidation Problem,"* P.J. Seaton, Abhijit Mitra. Oral Presentation, Abstract no. ORGN 356, 213<sup>th</sup> ACS National Meeting, San Francisco, USA, April 1997.

*"Anomalous Concentration Dependencies Observed in the Chemical Shifts of Aromatic Heterocyclic Compounds,"* Abhijit Mitra; P.J. Seaton, J. Capitani, Oral Presentation, OP-V-4, 16th International Congress of Heterocyclic Chemistry (IUPAC), Bozeman, MT, Aug. 1997.

Discussion leader at NSF workshop on NMR at GSU, Atlanta, Sept. 1995.

Session Chairperson at the IUPAC Conference on Organic Synthesis, Bangalore, India, Dec. 11-16, 1994.

*A Novel Method for the Assignment of Signals in <sup>13</sup>C Spectra,* Abhijit Mitra, Oral Presentation, National ACS Meeting, Chicago, Aug. 22-27, 1992.

*"A Selective Method for the Cleavage of Tetrahydropyranyl Ethers in the Presence of Other Acid Labile Functionalities."* K. Nambiar and Abhijit Mitra, Oral Presentation, National ACS Meeting, ACS Abstracts ORGN 173 (1984).