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- 1495 **The reaction of α -halocarbonyl compounds with $(\text{NH}_4)\text{OH}$, $(\text{NH}_4)_2\text{SO}_4$ or NH_4Cl solution under microwave-irradiation** Reaction of α -halo ketone (α -bromo and α -chloro ketone) under microwave irradiation gave the pyrazine and quinoxaline derivative in good yields. This reaction affords a clean and convenient synthetic method for pyrazine and quinoxaline derivatives.

Takamitsu Utsukihara*, Masahiro Koshimura, Kazunori Kitsuta, Akinori Sato, Masatoshi Matsushita, T Tomoyoshi Takahashi & C Akira Horiuchi

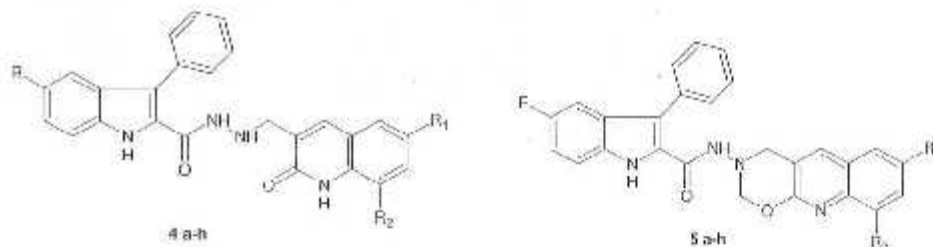
Hakodate National College of Technology, Department of Chemistry, 14-1, Tokura-cho, Hakodate 042-8501, Japan

- 1503 **A new alkoxy-, hydroxy- and nitrateiodination of α,β -unsaturated esters and amides using iodine-ammonium cerium(IV) nitrate and cerium(IV) sulfate**

Takamitsu Utsukihara, Keiko Ochiai, Masahiro Koshimura, Chikao Hashimoto, Hiroko Fujishiro, Akira Ikeda, Miyuki Kanamori & C Akira Horiuchi*

Department of Material and Environmental Engineering, Hakodate National College of Technology, Tokura-cho, Hakodate, Hokkaido 042-8501, Japan

- 1511 **Synthesis and antimicrobial activity of novel 5-substituted-*N*-4-substituted-2H-[1,3]oxazino[6,5-b]quinolin-3(4H)-yl)-3-phenyl-1H-indole-2-carboxamides** Compounds **3a-h**, obtained by the reaction of **1a,b** and **2a-d** on reaction with sodium borohydride followed by treatment with formaldehyde yield **4a-h** and **5a-h** respectively.



S M Basavarajaiiah* & B H M Mruthunjayawamy

P. G. Department of Chemistry, Vijaya College, R. V. Road, Basavanagudi, Bangalore 560 004, India

- 1520 **Crystal and molecular structure investigations of 9-fluorenone hydrazone by X-ray, DFT, ESI⁺-MS, FT-IR, UV-Vis and NMR methods**
- 9-Fluorenone hydrazone has been characterized using ESI⁺-MS, FT-IR, NMR, UV-Vis and X-ray diffraction. DFT calculations have been used to assign the NMR chemical shifts, to analyze the molecular orbitals and molecular electrostatic potential.



Jamal Lasri*, Naser Eltajer Eltayeb & Ali I Ismail

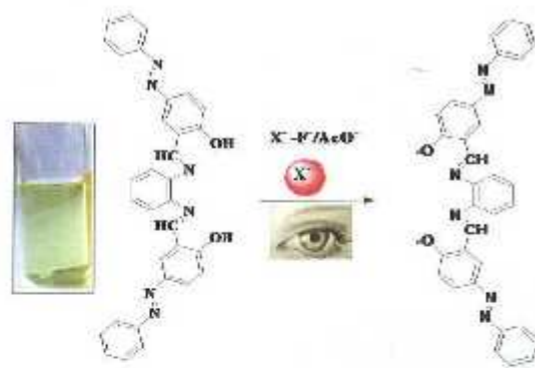
Department of Chemistry, Rabigh College of Science and Arts, P.O. Box 344, King Abdulaziz University, Jeddah, Saudi Arabia

- 1532 **An efficient synthesis of (±) 4-hydroxy-9-methoxy-5,11-dimethyl-6H-1,2,3,4-tetrahydro-benzo[*b*]carbazole**

Mohamed Larbi Bengaouer & Abbas Boukhari*

Laboratory of Organic Synthesis, Modeling and Optimization of Chemical Processes, Department of Chemistry Bacji Mokhtar-Annaba University, B.O. 12, 23000, Annaba, Algeria

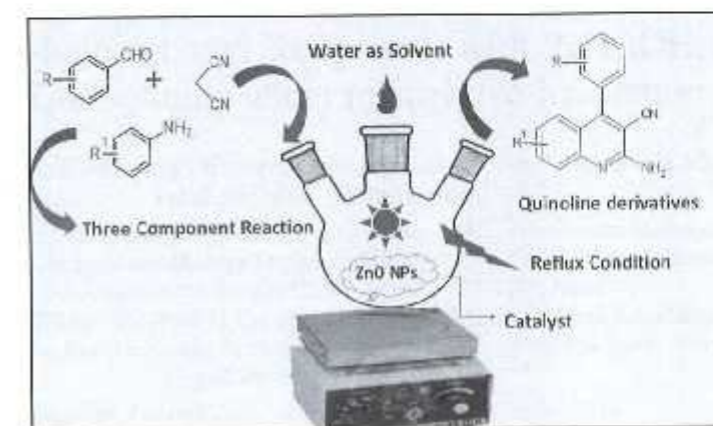
- 1541 **Structurally simple dipodalzo linked salicylaldehyde as colorimetric sensor for F⁻ and AcO⁻ ion recognition**



S Velmathi* & S Suganya

Department of Chemistry, Organic and Polymer Synthesis Laboratory, National Institute of Technology, Tiruchirappalli 620 015, India

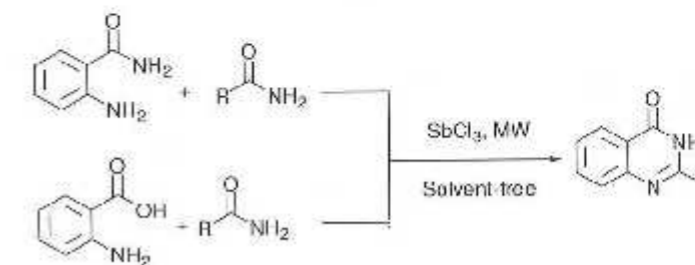
- 1548 **A simple and green synthesis of highly functionalized quinoline derivatives using zinc oxide nanoparticles**



Navanath J Valekar, Santosh S Undare, Dattatrya K Jamale, Sumil S Vibhute, Govind B Kolekar, Madhukar B Deshmukh & Prashant V Anbhule*

Medicinal Chemistry Research Laboratory, Department of Chemistry, Shivaji University, Kolhapur 416 004, India

- 1555 **Solvent-free synthesis of quinazolin-4(3*H*)-ones promoted by SbCl₅ under microwave condition**
- 2-Substituted quinazolin-4(3*H*)-ones have been synthesized in good to excellent yields by condensation of anthranilic amide or anthranilic acid with various acylamides using Antimony(III) chloride (SbCl₅) under microwave irradiation without solvent.



R = H (3a), Me (3b), Et (3c), Pr (3d), Ph (3e)

Wei-Li Wang, Xiao-Xia Liu, Tao Zhang, Ji-Ming Zhang* & Jian-Hua Zhou

School of Chemistry and Pharmaceutical Engineering, Qilu University of Technology, Jinan 250353, P. R. China

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Authors for correspondence are indicated by (*)