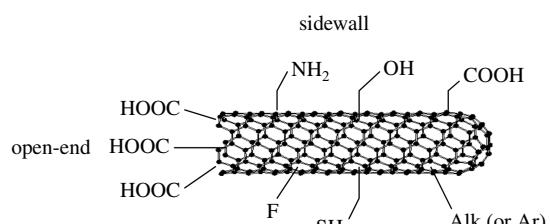


# Mendeleev Communications

## CONTENTS

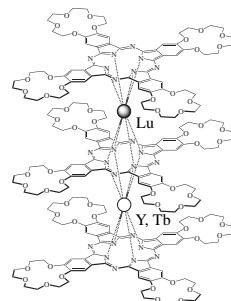
### 61 Chemical modification of carbon nanotubes

Valery N. Khabashesku, Merlyn X. Pulikkathara



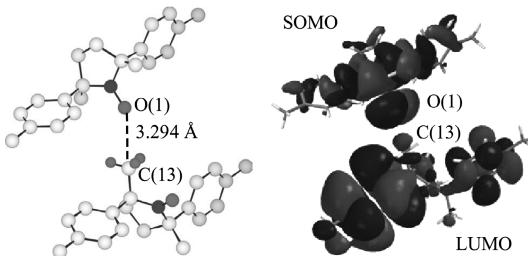
### 67 Synthesis and structure of homo- and heteronuclear rare earth element complexes with tetra-15-crown-5 phthalocyanine

Irina V. Nefedova, Yulia G. Gorbunova,  
Sergey G. Sakharov, Aslan Yu. Tsivadze



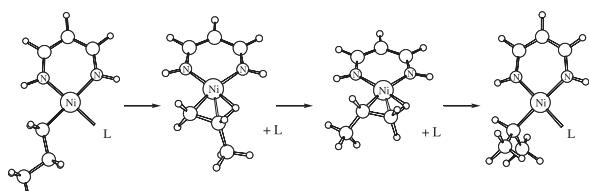
### 69 Antiferromagnetic interactions arising from a close contact between nitroxyl oxygen and $\beta$ -methyl carbon atoms carrying an $\alpha$ -spin in the solid state

Yoshiaki Uchida, Rui Tamura, Naohiko Ikuma,  
Kazuyoshi Masaki, Hiroki Takahashi,  
Satoshi Shimono, Jun Yamauchi



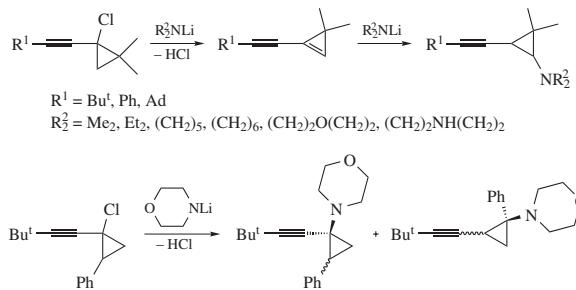
### 72 Quantum-chemical simulation of alkyl ligand transformations in $\beta$ -diketiminato nickel(II) complexes

Yury V. Petrusha, Alexander F. Shestakov



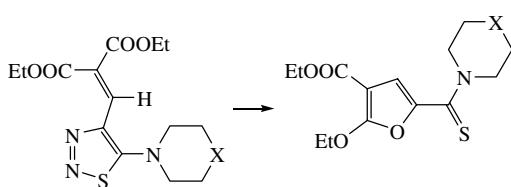
### 73 1-(Alk-1-ynyl)cyclopropenes: synthesis by interaction of 1-(alk-1-ynyl)-1-halocyclopropanes with lithium $N,N$ -dialkylamides and subsequent additions of the latter

Konstantin N. Shavrin, Valentin D. Gvozdev,  
Dmitry V. Budanov, Serafim V. Yurov,  
Oleg M. Nefedov

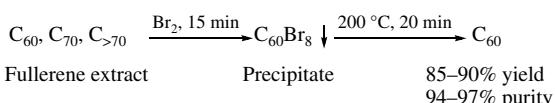


- 76 A new ring transformation of 1,2,3-thiadiazoles into furan-2-carbothioamides

Polina E. Kropotina, Lyudmila V. Dyudya,  
Tatiana V. Glukhareva, Yury Yu. Morzherin,  
Vasiliy A. Bakulev, Kristof Van Hecke,  
Luc Van Meervelt, Wim Dehaen

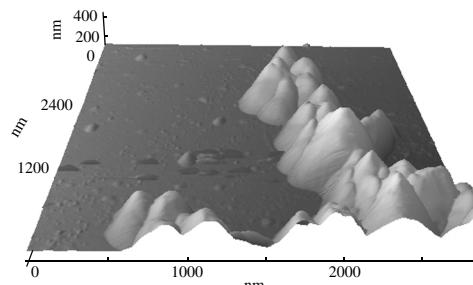


- ## 77 Non-chromatographic method for the large-scale isolation of C<sub>60</sub> from a fullerene extract



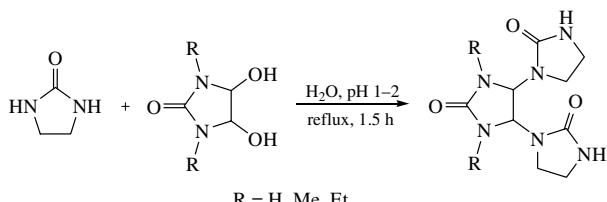
Pavel A. Troshin, Vyacheslav M. Martynenko,  
Rimma N. Lyubovskaya

- ## 79 Soluble hyperbranched polymers with high inner surface areas



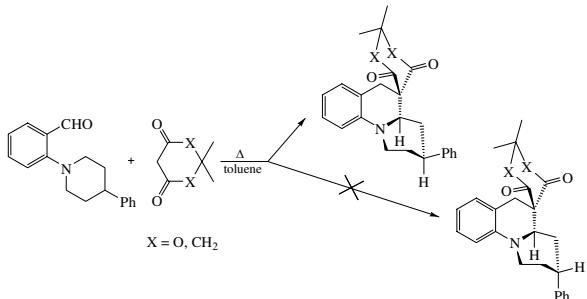
Sergei A. Arnautov, Vadim A. Davankov

- 80 **The first synthesis of assemblies of imidazolidine rings by  $\alpha$ -ureidoalkylation of imidazolidin-2-one with 4,5-dihydroxyimidazolidin-2-ones**



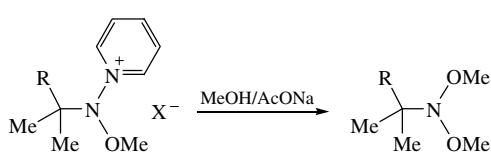
Andrey S. Sigachev, Angelina N. Kravchenko,  
Elena Yu. Maksareva, Boris V. Lozhkin,  
Konstantin A. Lyssenko, Nina N. Makhova

- 82 **Stereoselective synthesis of spirofused 3-substituted  
2,3,4,4a,5,6-hexahydro-6H-benzo[c]quinolizine  
using the *tert*-amino effect**



Elisaveta V. Deeva, Tatiana V. Glukhareva,  
Alexey V. Tkachev, Yury Yu. Morzherin

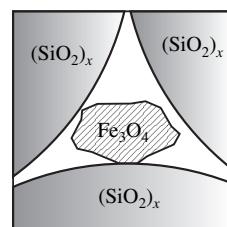
- ## 84 *N,N*-Dimethoxy-*N*-*tert*-alkylamines: new synthesis methods and the crystal structure of the precursor



Vasiliy G. Shtamburg, Alexander V. Tsygankov,  
Evgeny A. Klots, Ivan V. Fedyanin,  
Konstantin A. Lyssenko, Remir G. Kostyanovsky

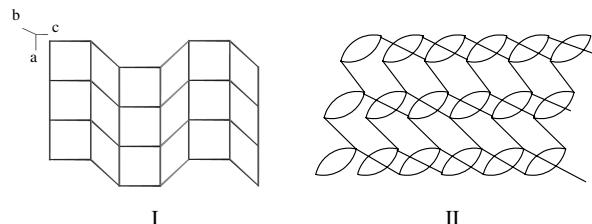
86 **Iron inclusion phases of ferromagnetic order within a photonic crystal based on  $\text{SiO}_2$**

Alexander N. Zakharov, Alla F. Mayorova,  
Svetlana N. Mudretsova, Nikolai S. Perov



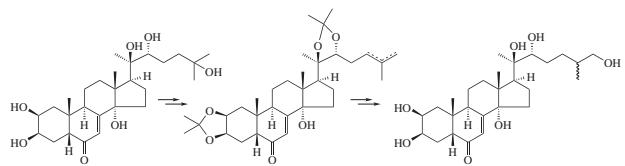
88 **A new isomer of  $\{\{\text{Zn(IX)}_2(\text{NO}_3)_2\} \cdot 2.5\text{H}_2\text{O}\}_n$  [IX = 1,4-bis(imidazole-1-methylene)benzene] as a rare example of topological isomerism in coordination polymers**

Sukhvinder K. Chawla, Meenu Arora,  
Kalle Nättinen, Kari Rissanen



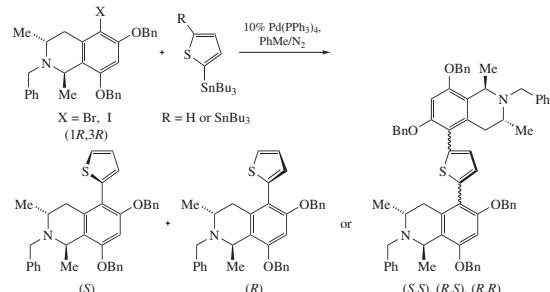
90 **Transformation of 20-hydroxyecdysone to inokosterone**

Rimma G. Savchenko, Ruslan V. Shafikov,  
Svetlana R. Afonkina, Viktor N. Odinokov



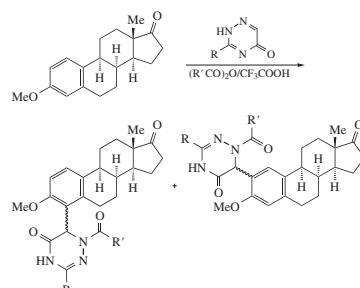
92 **Stille coupling of thiophene with a tetrahydroisoquinoline alkaloid**

Abdel-Sattar S. Hamad Elgazwy



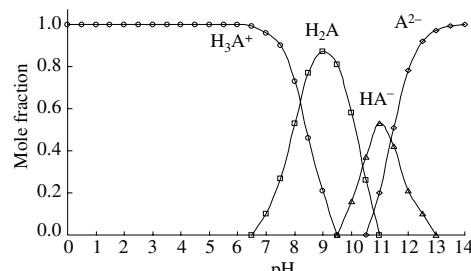
95 **One-step hetarylation of steroids: regioselective synthesis of new estrone derivatives**

Oleg N. Chupakhin, Dmitry G. Beresnev,  
Nadezhda A. Itsikson

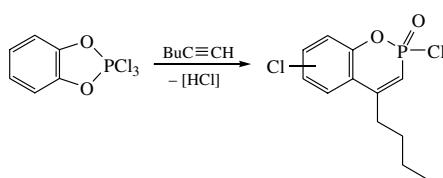


97 **Potentiometric determination of the dissociation constants of epirubicin HCl and irinotecan HCl**

Beril Anilanmert, Filiz Arioz Ozdemir,  
Nese Erdinc, Mürsit Pekin

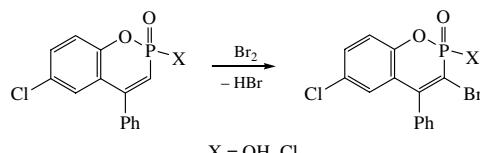


98 The reaction of hex-1-yne with 2,2,2-trichloro-benzo[*d*]-1,3,2-dioxaphosphole



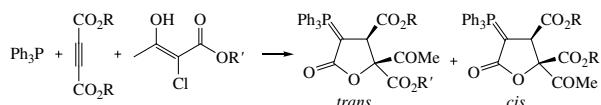
Andrey V. Nemtarev, Elena N. Varaksina,  
Vladimir F. Mironov, Rashid Z. Musin,  
Alexander I. Konovalov

100 Bromination of benzo[*e*]-1,2-oxaphosphorinine derivatives



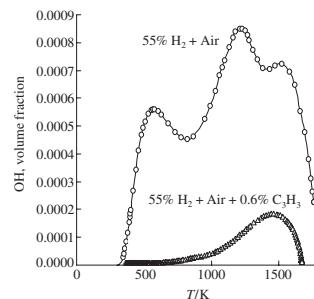
Elena N. Varaksina, Sergey A. Mezentsev,  
Vladimir F. Mironov, Alexander I. Konovalov

102 Synthesis of 4,5-dialkyl 5-acetyl-3-oxo-3-(triphenylphosphoranylidene)tetrahydrofuran-4,5-dicarboxylates



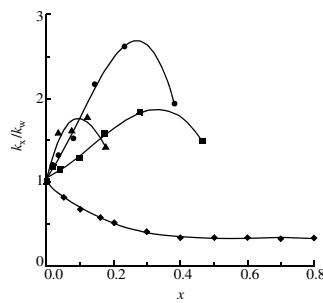
Issa Yavari, Bita Mohtat, Hasan Zare

104 Effect of propylene additives on rich hydrogen-air flames



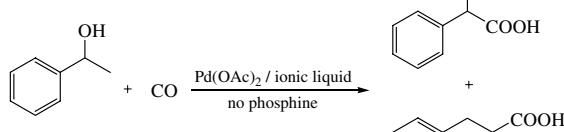
Valery A. Bunev, Vyacheslav S. Babkin

106 Oxidation of a cysteinato ligand by peroxodisulfate in a water-methanol solvent



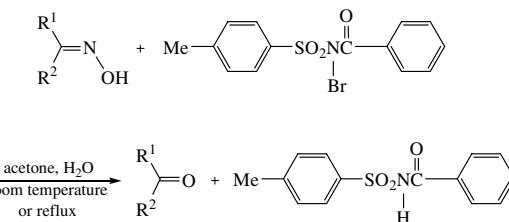
Marián Palcut

107 Carbonylation of alcohols in the Pd(OAc)<sub>2</sub>/TsOH/molten salt system



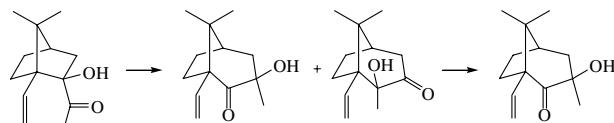
Oleg L. Eliseev, Tatyana N. Bondarenko,  
Nikolai N. Stepin, Albert L. Lapidus

109 **Selective oxidation of oximes to carbonyl compounds using *N*-bromo-*N*-benzoyl-4-toluenesulfonamide**



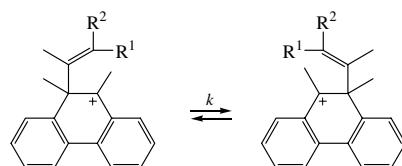
Ardeshir Khazaei, Abbas Amini Manesh

111 **Double  $\alpha$ -ketol rearrangement of (*1S,2R,4R*)-2-acetyl-1-vinyl-2-hydroxy-7,7-dimethylbicyclo[2.2.1]heptane**



Nikolay S. Vostrikov, Vener Z. Vasikov, Larisa V. Akulova, Mansur S. Miftakhov

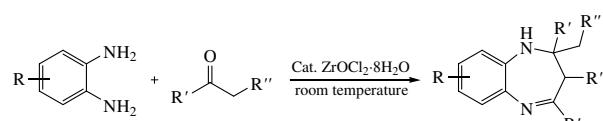
112 **Degenerate rearrangements of long-lived 9,10-dimethyl-9-(1-methyl-1-vinyl)-phenanthrenium and 9,10-dimethyl-9-(*trans*-1-methyl-1-propenyl)-phenanthrenium ions: unexpected strong retardation of vinyl migrations**



Vitaly G. Artamoshkin, Vladimir A. Bushmelev, Alexander M. Genaev, Vyacheslav G. Shubin

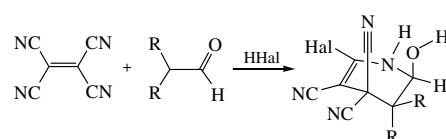
$R^1 = H, R^2 = Me; k = 6 \times 10^5$   
 $R^1 = Me, R^2 = H; k = 4$

113 **Zirconyl(IV) chloride: a novel and efficient reagent for the rapid synthesis of 1,5-benzodiazepines under solvent-free conditions**



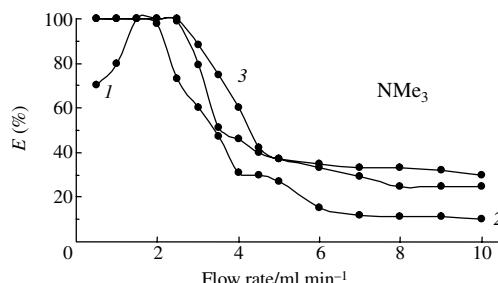
Rahul R. Nagawade, Devanand B. Shinde

115 **Synthesis of 2-halo-6-hydroxy-5,5-dimethyl(ethyl)-5,6-dihydro-1*H*-pyridine-3,4,4-tricarbonitriles by the reaction of tetracyanoethylene with aldehydes**

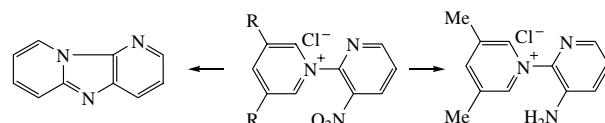


Aleksei V. Eremkin, Sergei N. Molkov, Oleg V. Ershov, Yakov S. Kayukov, Oleg E. Nasakin, Viktor A. Tafeenko, Evgeniya V. Nurieva

117 **Polymethacrylate sorbent for the solid-phase extraction of amines**



Mikhail A. Gavrilenco, Nataliya A. Gavrilenco



Roman S. Begunov, Galina A. Ryzvanovich,  
Ol'ga I. Nozdracheva

---

## AUTHOR INDEX

- Afonkina, Svetlana R., 90  
Akulova, Larisa V., 111  
Anilamnert, Beril, 97  
Arnautov, Sergei A., 79  
Arora, Meenu, 88  
Artamoshkin, Vitaly G., 112  
Babkin, Vyacheslav S., 104  
Bakulev, Vasiliy A., 76  
Begunov, Roman S., 119  
Beresnev, Dmitry G., 95  
Bondarenko, Tatyana N., 107  
Budanov, Dmitry V., 73  
Bunev, Valery A., 104  
Bushmelev, Vladimir A., 112  
Chawla, Sukhvinder K., 88  
Chupakhin, Oleg N., 95  
Davankov, Vadim A., 79  
Deeva, Elisaveta V., 82  
Dehaen, Wim, 76  
Dyudya, Lyudmila V., 76  
Eliseev, Oleg L., 107  
Erdinc, Nese, 97  
Eremkin, Aleksei V., 115  
Ershov, Oleg V., 115  
Fedyanin, Ivan V., 84  
Gavrilenko, Mikhail A., 117  
Gavrilenko, Nataliya A., 117
- Genaev, Alexander M., 112  
Glukhareva, Tatiana V., 76, 82  
Gorbunova, Yulia G., 67  
Gvozdev, Valentin D., 73  
Hamad Elgazwy, Abdel-Sattar S., 92  
Ikuma, Naohiko, 69  
Itsiokson, Nadezhda A., 95  
Kayukov, Yakov S., 115  
Khabashesku, Valery N., 61  
Khazaei, Ardeshir, 109  
Klots, Evgeny A., 84  
Konovalov, Alexander I., 98, 100  
Kostyanovsky, Remir G., 84  
Kravchenko, Angelina N., 80  
Kropotina, Polina E., 76  
Lapidus, Albert L., 107  
Lozhkin, Boris V., 80  
Lyssenko, Konstantin A., 80, 84  
Lyubovskaya, Rimma N., 77  
Makhova, Nina N., 80  
Maksareva, Elena Yu., 80  
Manesh, Abbas Amini, 109  
Martynenko, Vyacheslav M., 77  
Masaki, Kazuyoshi, 69  
Mayorova, Alla F., 86  
Mezentsev, Sergey A., 100  
Miftakhov, Mansur S., 111
- Mironov, Vladimir F., 98, 100  
Mohtat, Bita, 102  
Molkov, Sergei N., 115  
Morzherin, Yury Yu., 76, 82  
Mudretsova, Svetlana N., 86  
Musin, Rashid Z., 98  
Nagawade, Rahul R., 113  
Nasakin, Oleg E., 115  
Nefedov, Oleg M., 73  
Nefedova, Irina V., 67  
Nemtarev, Andrey V., 98  
Nozdracheva, Ol'ga I., 119  
Nurieva, Evgeniya V., 115  
Nättinen, Kalle, 88  
Odinokov, Viktor N., 90  
Ozdemir, Filiz Arioz, 97  
Palcut, Marián, 106  
Pekin, Mürsit, 97  
Perov, Nikolai S., 86  
Petrusha, Yury V., 72  
Pulikkathara, Merlyn X., 61  
Rissanen, Kari, 88  
Ryzvanovich, Galina A., 119  
Sakharov, Sergey G., 67  
Savchenko, Rimma G., 90  
Shafikov, Ruslan V., 90  
Shavrin, Konstantin N., 73
- Shestakov, Alexander F., 72  
Shimono, Satoshi, 69  
Shinde, Devanand B., 113  
Shtamburg, Vasiliy G., 84  
Shubin, Vyacheslav G., 112  
Sigachev, Andrey S., 80  
Stepin, Nikolai N., 107  
Tafeenko, Viktor A., 115  
Takahashi, Hiroki, 69  
Tamura, Rui, 69  
Tkachev, Alexey V., 82  
Troshin, Pavel A., 77  
Tsivadze, Aslan Yu., 67  
Tsygankov, Alexander V., 84  
Uchida, Yoshiaki, 69  
Van Hecke, Kristof, 76  
Van Meervelt, Luc, 76  
Varaksina, Elena N., 98, 100  
Vasikov, Vener Z., 111  
Vostrikov, Nikolay S., 111  
Yamauchi, Jun, 69  
Yavari, Issa, 102  
Yurov, Serafim V., 73  
Zakharov, Alexander N., 86  
Zare, Hasan, 102