

1. General Information

The European Journal of Organic Chemistry (EurJOC) is published twice monthly.

Manuscripts should be submitted online using our online submission service at http://www.manuscriptXpress.org. You should prepare a single file containing all tables, graphics, supporting information (where appropriate) etc. Acceptable file formats are Microsoft Word, Rich Text Format, Postscript and PDF. Avoid the use of page breaks even between the title page and the introduction. If graphics are included at the end of the manuscript, try to fit as many as possible onto a single page. The file should have margins of 2 cm and be 1.5-line spaced.

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IMPORTANT: Any manuscript already available on personal/ group web pages will be considered by the editors as already published and will not be accepted.

On behalf of our authors who are also US National Institutes of Health (NIH) grantees, we will deposit in PubMed Central (PMC) and make public after 12 months the peer-reviewed version of the author's manuscript. By assuming this responsibility, we will ensure that our authors are in compliance with the NIH request, and make certain that the appropriate version of the manuscript is deposited. We await the release by PMC of the protocols regarding manuscript submission. We reserve the right to change or rescind this policy.

2. Types of Contributions

EurJOC publishes articles on synthetic organic chemistry, bioorganic and physical organic chemistry. All contributions undergo peer review. An author may appeal against the decision on his/her manuscript, in writing. Three types of contributions are accepted for publication:

- Full Papers are articles with an Experimental Section that describe a significant contribution to the development of an area of research of importance. There are no restrictions placed on the length of a Full Paper.
- Short Communications are brief reports on results of high significance and urgency. Generally, they are no longer than 12–16 double-spaced pages or 3-4 typeset pages. An Experimental Section (as a separate paragraph or as part of the references) is desirable; if it is not included in the paper, the experimental data should be submitted as Supporting Information for refereeing purposes, and marked as such. A justification for urgent publication should accompany submission.
- A Microreview introduces the reader to a particular area of an author's research through a concise overview of a selected topic. As a rule, Microreviews are written on invitation, although unsolicited articles are also welcome. It is recommended, however, to contact the editor before submitting an unsolicited Microreview. The content should balance scope with depth; it should be a focused review of 25-30 double-spaced pages or 6-8 typeset pages. Reference to important work from others that is significant to the topic should be included. Microreviews will be refereed but will have no Experimental Section.

3. Manuscript Preparation

3.1 General

The whole of the manuscript should be 1.5-line spaced and in a large script (Times New Roman, 12 pt). We recommend that you prepare your text with Microsoft Word (PC or Macintosh versions) (see Section 3.2). Page numbers are essential: use the automatic pagination function incorporated in your word processing software. Leave a 2-cm margin around the perimeter of each page. Consult a current issue of the journal for an overview of the format. A manuscript should comprise: ♦ Title Page ♦ Keywords ♦ Abstract ♦ Main Text including Introduction, Results and Discussion etc. ♦ Experimental Section ♦ Acknowledgments (optional) ♦ Captions ♦ Tables ♦ References ♦ Schemes and Figures ♦ Graphical Abstract \diamond For Microreviews only: Biographical sketches and a portrait-quality photograph of all authors (when several authors from one institution are involved, group photographs are pre-

3.2 Text

The text should be typed with carriage returns (hard returns) only at the end of a paragraph, title, heading and similar features. Avoid end-of-line word divisions.

Abbreviations and acronyms should be used sparingly and consistently. Where they first appear in the text, the complete term apart from the most common ones such as NMR, IR, THF, tBu etc. — should also be given.

In the Experimental Section, quantities of reactants, solvents etc. should be included in parentheses [e.g. A solution of triphenylphosphane (500 mg, 1.91 mmol) in dichloromethane (15 mL) was added to...l.

NMR spectroscopic data should be quoted as in the following example: ¹H NMR (300 MHz, C_6D_6 , 25 °C): $\delta = 1.3$ (s, 18 H, SiMe₃), 0.9 (d, ${}^{3}J_{H,H}$ = 5.7 Hz, 2 H, 2-H) ppm. For each chemical shift, additional information should be given in the order: multiplicity, coupling constant, number of protons, assignment.

The purity of all new compounds should be verified by elemental analysis to an accuracy within ±0.4%. In special cases, for instance when the compound is unstable or not available in sufficient quantities for complete analysis, the exact relative molecular mass obtained from a high-resolution mass spectrum and a clean ¹³C NMR spectrum (as additional material for inspection by the referees) should be supplied.

Symbols of physical quantities, but not their units (e.g. T for temperature, J, λ), stereochemical information (cis, trans, Z, R), locants (N-methyl), symmetry and space groups $(P2_1/c)$, and prefixes in formulas or compound names (tBu, tert-butyl) must be in italics. Latin phrases, such as "in situ", should not.

Stereochemical descriptors, such as D- and L-, and molar (M) or normal (N) should be in small capitals. Use character formatting for italic and bold characters. Avoid any special style sheets to format these features. Write capital letters using the keyboard (shift + letter key), not the format "Capital letter" in Word.

Use only characters from the Symbol and Normal Text character sets, especially when inserting Greek letters and characters with umlauts, accents, tildes, etc.: α, ä, à, ã, Å.

There are three types of hyphens: normal dashes (-), en dashes (-), and em dashes (—). Use these as illustrated — spacing is important too — in the following examples:

well-known reaction	C-H bond	
six-membered ring	Tables 2-4	
3-position of the ring	carbon-oxygen bond	
signal-to-noise ratio	C-N stretch	
$Mo-K_{\alpha}$	Diels-Alder reaction	
1,2-dicyanobutane	structure-activity relationship	
<i>p-tert</i> -butylphenol	80-100 mg	
(-)-tartaric acid	carried out at −10 °C	
$[M^+ - CH_3]$	cm^{-1}	

Use the symbol \times where appropriate, rather than the letter x: ... washed with water (2 × 150 mL) ...
Use the double quotation marks "..." rather than "...", "..." or «...».

Graphics (including structural formulas, schemes, figures, equations and small graphical items that appear in captions) must be submitted camera-ready on separate pages after acceptance of the manuscript (see Section 3.5).

Lines or arcs, for example to indicate ring compounds, cannot be used within the text. Another method for indicating such compounds must be devised. Please contact the Editorial Office if any help is needed.

If practical, authors should use a systematic name (IUPAC or Chemical Abstracts) for each title compound in the Experimental Section. Please try to avoid complicated, multi-line names if a simpler version (e.g. alcohol 4, ketone 5, compound 6) could be used instead.

3.3 Tables

Use the Insert Table command from the Table menu or use the Insert Table button on the Standard toolbar for creating tables, and use tabs ONLY to move between cells.

3.4 References

We strongly recommend the use of the Endnotes feature of Word. If you prefer not to use this function, references should be indicated by numbers in square brackets as superscripts and, if applicable, after punctuation (example: text.^[1]). Use the Format Font menu. Journal titles should be abbreviated according to the Chemical Abstracts Service Source Index (CASSI).

The Author is responsible for correct citations. The European Journal of Organic Chemistry is a member of Cross Ref. (http:// www.crossref.org), a service which links reference citations to the online content that those references cite. This can only function if the citations are accurate. Please ensure that only one reference is cited under each reference number or that a composite reference is subdivided into parts a), b) etc. For example:

[1] A. Einstein, A. N. Other, Eur. J. Org. Chem. 2003, 1-15. [2] R. Schoenfeld, The Chemist's English, 3rd ed., VCH, Weinheim, **1990**, p. 111.

[1] a) A. Einstein, A. N. Other, Eur. J. Org. Chem. 2003, 1-15; b) R. Schoenfeld, The Chemist's English, 3rd ed., VCH, Weinheim, **1990**, p. 111.

[1] a) A. Einstein, A. N. Other, Eur. J. Org. Chem. 2003, 1-15; R. Schoenfeld, The Chemist's English, 3rd ed., VCH, Weinheim, 1990, p. 111.

3.5 Graphics

Graphics are schemes, figures, equations and small graphical items that appear in captions. Graphics differ fundamentally from the text portion of your manuscript in that they must be scanned or electronically processed. Schemes should be self-explanatory: reaction conditions should therefore be given above the arrows rather than in the caption.

In the revised version please submit each graphic in its own file within a graphic folder. For good reproduction, the following formats are preferred: *.cdr, *.cdx, *.tif, *.pdf, *.psd, *.ai, *.fh, * .qxd,*.pct, *.eps. The resolution should be a minimum of 300 dpi and 600 dpi for bitmap graphics.

Consult the following table for the appropriate size of lettering. Lettering smaller than 3.0 mm will reproduce poorly. Please use only one size of lettering per graphic and the same letter font for all graphics.

Table 1. Guide for preparing graphics

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Letter Size		Maximum Graphic Width ^[a]	
	Font	1-Column Format	2-Column Format
	Times New Roman		
3.0 mm	12	13 cm	26 cm
3.5 mm	14	15 cm ^[b]	_
4.0 mm	16	17 cm ^[b]	_
4.5 mm	18	19 cm	-

[a] Most graphics are in 1-column format. [b] We prefer lettering of 3.5 or 4.0 mm with maximum graphic widths of 15 or 17 cm, respectively.

The settings for one-column graphics constructed with Chem Draw are: Print Setup: Orientation Portrait. Caption and Label Settings: Font Times New Roman, Font Style Standard, Size 12.

Note that the graphical abstract must be in one-column format and in black-and-white.

These settings help ensure the correct letter-size-to-graphic-width ratio for best reproduction.

Use abbreviations such as R^1 , R^2 (not R_2), R', R'', Ph, Me, Et, iPr, tBu, Ph, Bn (benzyl), Bz (benzoyl), Hal, L, M (metal), X (heteroatom).

4. Crystallographic Data

Authors must deposit the data of X-ray structure analyses in a crystallographic database before submitting their manuscript, so that referees can access the information electronically. The two databases, the Cambridge Crystallographic Data Centre (CCDC) and the Fachinformationszentrum Karlsruhe (FIZ) have the same procedure for the deposition of data and both will be pleased to provide help. In general, you will receive a depository number from the database two working days after electronic deposition. Send your data to the appropriate address below and quote the standard text, including the depository number, in your manuscript.

• For all compounds without C-H bonds:

Fachinformationszentrum Karlsruhe (FIZ) 76344 Eggenstein-Leopoldshafen, Germany

Phone: +49-(0)7247/808-205 Fax: +49-(0)7247/808-666 E-mail: crysdata@fiz-karlsruhe.de

FTP: ftp.fiz-karlsruhe.de (under path /pub/csd)

WWW: http://www.fiz-karlsruhe.de (under "Products and Ser-

Further details of the crystal-structure investigation(s) may be obtained from the Fachinformationszentrum Karlsruhe, 76344 Eggenstein-Leopoldshafen, Germany, on quoting the depository number(s) CSD-....

• For all compounds with at least one C-H bond:

Cambridge Crystallographic Data Centre (CCDC) 12 Union Road, Cambridge CB2 1EZ, UK

Phone: +44-(0)1223/336-408 Fax: +44-(0)1223/336-033 E-mail: deposit@ccdc.cam.ac.uk WWW: http://www.ccdc.cam.ac.uk

CCDC-***** contains the supplementary crystallographic data for this paper. These data can be obtained free of charge from The Cambridge Crystallographic Data Centre via www.ccdc.cam.ac.uk/ datarequest/cif.

NOTE: Please use the free online Checkcif service provided by the International Union of Crystallography and submit the Checkcif report along with your manuscript: http://journals.iucr.org/services/ cif/checkcif.html.

Finally, before you return your revised manuscript, please update your database entry if necessary.

5. Electronic Supporting Information

A manuscript may include Electronic Supporting Information which will be accessible only on the WWW. Authors must keep a copy to make available to readers who do not have access to the internet. As this material [text, tables, schemes, figures but not crystallographic (CIF) data, which must be submitted to either the FIZ or the CCDC] undergoes the peer review process, it must be included, clearly marked as "Supporting Information to be published electronically", when the paper is submitted. The following file formats are accepted: MS Winword or ASCII (*.doc, *.txt), MS Excel (*.xls), Encapsulated Postscript (*.eps), Portable Document Format (*.pdf), graphics embedded in MS Winword; if you wish to submit other formats, please consult the Editorial Office. When preparing such material, authors should keep in mind that — once accepted — it will be made available as provided by the author and not edited. Material accepted for electronic publication will be available mostly as PDF files (Adobe Acrobat Reader required) by following the Table of Contents link of EurJOC's WWW home page. A standard text will be added on the first page of the article in the printed version:

• Supporting information for this article is available on the WWW under http://www.eurjoc.org or from the author.

The supporting information file must start with the title of the paper, the authors and the CASSI abbreviation of the journal to which it was submitted (e.g. Eur. J. Org. Chem.).

6. Basic Keyword List

To increase the relevance of articles found by search engines of Wiley InterScience, we have compiled a keyword catalogue common to our chemistry journals that is printed here and is also available online (http://www.eurjoc.org).

To assist you in finding keywords they are listed according to categories. You may choose keywords from any category. As with all such records, a few guidelines facilitate the catalogue's use, and these are briefly explained below:

- 1. As many as possible, but at least two, of the maximum of five keywords assigned to an article must come from this list.
- 2. Named reactions will be incorporated only in exceptional cases. Generally the reaction type is selected instead. For example, Diels-Alder reactions will be found under "Cycloadditions" and Claisen rearrangements under "Rearrangements".
- 3. Heteroanalogues of compounds are mainly classified under the C variants, for example, (hetero)cumulenes, (hetero)dienes. A few aza and phospha derivatives are exceptions.
- 4. Compounds with inorganic components that are central to the article are listed under the element, for instance, iron complexes under "Iron". Some group names like "Alkali metals" exist alongside the names of important members of the group like "Lithium". In such cases the group name is used for these members only when comparative studies are described. The members not appearing separately are also categorised under the group name.
- 5. A keyword in the form "N ligand" is only chosen if a considerable portion of the paper deals with the coordination of any ligand ligating through the atom concerned.
- 6. Spectroscopic methods are assigned as keywords only if the article is about the method itself, or if the spectroscopic technique has made an important contribution to the problem under investigation.
- 7. "Structure elucidation" is intended only if the crux of the paper is a structural elucidation or if a combination of several spectroscopic techniques were needed for conclusive solution of the structure.
- 8. An attempt has been made to avoid synonyms and to select more general concepts rather than specialized terms. Thus, the term "Double-decker complexes" is excluded in favour of "Sandwich complexes".

This list will be a "living" catalogue to be flexible enough to absorb the new developments in chemistry. We therefore welcome all suggestions from our authors that might improve its user-friendli-

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Analytical Chemistry and Spectroscopic Methods

Analytical methods Circular dichroism Cyclic voltammetry Electron diffraction Electron microscopy Electrophoresis ENDOR spectroscopy

EPR spectroscopy EXAFS spectroscopy Fluorescence spectroscopy Gas chromatography
High-throughput screening
Ion chromatography
Ion exchange
IR spectroscopy
Isotopic labeling
Laser spectroscopy
Liquid chromatography

Luminescence
Mass spectrometry

Moessbauer spectroscopy Neutron diffraction NMR spectroscopy Photoelectron spectroscopy Plasma chemistry

Rotational spectroscopy Scanning probe microscopy

Raman spectroscopy

Sensors

Surface analysis

Surface plasmon resonance

Trace analysis
UV/Vis spectroscopy
Vibrational spectroscopy

Water chemistry

X-ray absorption spectroscopy

X-ray diffraction ZEKE spectroscopy

Biological Chemistry and Chemical Biology (including Biochemistry, Bioinorganic Chemistry, Bioorganic Chemistry, Medicinal Chemistry and Molecular and Cell Biology)

Allosterism
Amino acids
Angiogenesis
Antibiotics
Antibiodies
Antifungal agents
Antigens
Antisense agents
Antitumor agents
Antiviral agents
Azapeptides

Bioinformatics
Bioinorganic chemistry
Biological activity
Biomimetic synthesis
Bioorganic chemistry
Biophysics
Biosensors
Biosynthesis
Biotransformations
C-Glycosides
Carbohydrates

Azasugars

Carbon dioxide fixation Carotenoids Cell adhesion Cell recognition Cerebrosides

Chaperone proteins Cobalamines Cofactors

Combinatorial chemistry Cyclitols Cyclodextrins Cytokines DNA DNA cleavage
DNA damage
DNA methylation
DNA recognition
DNA replication
DNA structures
Dopamines
Drug delivery
Drug design
Electron transport
Enzyme models
Enzymes

Fibrous proteins
Fluorescent probes
Gene expression
Gene sequencing
Gene technology
Genomics
Glycoconjugates
Glycolipids
Glycopeptides

Glycoproteins
Glycosides
Glycosylation
Growth factors
Helical structures
Heme proteins
Hormones
Hydrolases
Immobilization
Immunoassays

Immunoassays
Immunochemistry
Immunology
Inhibitors
Ion channels
Ionophores

Isomerases Ligases Lipids Lipophilicity Lipoproteins Liposomes Lyases

Lyases Medicinal chemistry Membrane proteins Membranes Metabolism Metalloenzymes Metalloproteins

Micelles
Molecular evolution

mRNA
Mutagenesis
Natural products
Neurochemistry
Neurotransmitters
Nitrogen fixation

Nucleic acids Nucleobases Nucleosides Nucleotides Oligonucleotides Oligosaccharides Oxidoreductases

Nitrogenases

Oxidoreductases
Peptide nucleic acids

Peptides
Peptidomimetics
Pheromones
Phospholipids
Photoaffinity labeling
Photosynthesis

Phytochemistry Polyketides

Polymerase chain reaction

Prodrugs
Prostaglandins
Protein design
Protein engineering
Protein folding
Protein models
Protein modifications
Protein structures
Proteins

Proton transport
Radiopharmaceuticals
Receptors
Redox chemistry
Ribonucleosides
Ribozymes
RNA
RNA recognition

RNA structures

Proteomics

Sensitizers
Sequence determination
Sialic acids
Siderophores
Signal transduction

Steroids
Structure—activity relationships
Terpenoids

Terpenoids
Toxicology
Transferases
tRNA
Vesicles
Vitamins

Sphingolipids

Catalysis

Asymmetric catalysis Autocatalysis Biphasic catalysis Catalytic antibodies Enzyme catalysis

Heterogeneous catalysis Homogeneous catalysis Phase-transfer catalysis Supported catalysts

Coordination Chemistry: Compound Classes

Cage compoundsCupratesMetallacyclesPolyoxometalatesChelatesDendrimersMetallocenesSandwich complexes

Clathrates Heterometallic complexes Nitrogen oxides Ylides

Cluster compounds

Coordination Chemistry: Ligand Classes

Alkene ligands Carboxylate ligands Macrocyclic ligands Phosphane ligands Alkyne ligands Carbyne ligands P ligands N ligands Allyl ligands Cyclopentadienyl ligands N,O ligands S ligands Arene ligands Diene ligands N,P ligands Si ligands O ligands As ligands Dioxygen ligands Tridentate ligands Bridging ligands Fluorinated ligands Oxo ligands Tripodal ligands Carbene ligands Hydride ligands Peroxo ligands Vinylidene ligands Carbonyl ligands Isocyanide ligands

Coordination Chemistry: Methodology and Reactions

Carbon dioxide fixation Matrix isolation Oxidation Solvolysis

Chemical vapor deposition Metathesis Radical reactions Substituent effects

Chiral resolution Neighboring-group effects Reduction Template synthesis

Crystal engineering Nitrogen fixation Reduction Reduction

Reduction Reduction Reduction

Ligand design O-O activation Solvent effects

Coordination Chemistry: Structure

Agostic interactions Electronic structure Inclusion compounds Noncovalent interactions Aurophilicity Isolobal relationship Electrostatic interactions Pi interactions Charge transfer Fluxionality Jahn-Teller distortion Stacking interactions Cooperative effects Helical structures Ligand effects Structure elucidation Coordination modes Metal-metal interactions Through-bond interactions Host-guest systems Donor-acceptor systems Hydrogen bonds Multiple bonds Through-space interactions

Electron-deficient compounds

Elements and Element Groups

Actinides Chlorine Iron Phosphorus Alkali metals Chromium Krypton Platinum Pnicogens Alkaline earth metals Cobalt Lanthanides Copper Potassium Aluminum Lanthanum Antimony Deuterium Lead Rare earths Argon Fluorine Lithium Rhenium Arsenic Gallium Magnesium Rhodium Barium Germanium Manganese Rubidium Beryllium Gold Mercury Ruthenium Bismuth Group 13 elements Molybdenum Samarium Boron Group 14 elements Neon Scandium Bromine Hafnium Nickel Selenium Cadmium Halogens Niobium Silicon Calcium Helium Nitrogen Silver Carbon Hydrogen Noble gases Sodium

Osmium

Oxygen

Palladium

Indium

Iodine

Iridium

Strontium

Tantalum

Sulfur

Cerium

Cesium

Chalcogens

Vanadium Technetium Titanium Yttrium Tellurium Tungsten Zinc Xenon Thallium Uranium Ytterbium Zirconium

Tin

Environmental and Atmospheric Chemistry

Oxidation Reaction mechanisms Anions Environmental chemistry Atmospheric chemistry Fluorine Ozone Reactive intermediates Cations Gas-phase reactions Peroxides Sensors Photochemistry Chlorine Green chemistry Toxicology Computer chemistry Halogenation Photolysis Trace analysis Crop protection agents Kinetics Photooxidation Waste prevention Cycloaddition Radical ions Water chemistry

Molecular dynamics Denitrification Radical reactions Molecular modeling

Desulfurization Nitrogen oxides Radicals

Inorganic Chemistry

Cyanides Silicates **Nitrides** Alanes Allotropy Electron-deficient compounds Nonstoichiometric compounds Sol-gel processes Alloys Fluorides Organic-inorganic hybrid Solid-phase synthesis Aluminosilicates Halides composites Solid-state reactions Perovskite phases Amalgams High-pressure chemistry Solid-state structures Amorphous materials Host-guest systems Peroxides Solvothermal synthesis Anions Hydrates Phosphaalkenes Spinel phases Automerization Hydrides Phosphaalkynes Stannanes

Hydrothermal synthesis Phosphanes Subvalent compounds Autoxidation Azides Hypervalent compounds Phosphazenes Synthesis design Bond theory Inclusion compounds Platinates Titanates Topochemistry **Boranes** Intercalations **Pnictides** Intermetallic phases Polyanions Transition metals **Borates**

Isoelectronic analogues Carbene homologues Polycations Transuranium elements Polychalcogenides Valence isomerization Carbides Isomers

Layered compounds Polyhalides Carboranes Vanadates

Cations Lewis acids Polymorphism Zeolite analogues Chain structures Lewis bases Polyoxometalates Zeolites Main group elements Radical ions **Zincates**

Chromates Clathrates Metal-metal interactions Radicals Zintl anions Cluster compounds Mixed-valent compounds Silanes Zintl phases

Materials Science: General

Allovs Cyclooligomerization Liquid crystals Polymerization Amorphous materials Cyclotrimerization Materials science Polymers

Automerization Dendrimers Mechanical properties Ring-opening polymerization

Block copolymers Doping Membranes Scanning probe microscopy Ceramics Energy conversion Mesophases Semiconductors

Sensitizers Charge-carrier injection **Fullerenes** Mesoporous materials Gels Metal-metal interactions Sensors Chemical vapor deposition Chemical vapor transport Glasses Metallomesogens Superconductors

Clays Holography Micelles Surface chemistry Cluster compounds Imprinting Thin films Microporous materials Intercalations Monolayers Vesicles Colloids

Conducting materials Interfaces Nanostructures Zeolite analogues

Copolymerization Intermetallic phases Nanotechnology Zeolites Crystal engineering Ladder polymers Nanotubes

Layered compounds

Nonlinear optics

Crystal growth

Protecting groups

Miscellaneous

History of science

Organic Chemistry: Compound Classes

Betaines Enols Peroxides Biarvls Aldehydes Enones Pheromones Calixarenes Alkaloids Enynes Phosphorus heterocycles Carbanions Alkanes Fatty acids Phthalocyanines Carbenes Alkenes Fragrances Polycycles Carbenoids Alkynes Fullerenes Polymethines Carbocations Allenes Fused-ring systems Porphyrinoids Carbocycles Allylic compounds Heterocycles Quinodimethanes Carbohydrates Amides Hydrazones Ouinones Carboxylic acids Amines Hydrides Radical ions Carotenoids Amino acids Hydrocarbons Radicals Catenanes Amino alcohols Cations Ketones Rotaxanes Cavitands Amino aldehydes Lactams Schiff bases Crown compounds Amphiphiles Lactones Small ring systems Cryptands Anhydrides Spiro compounds Ladder polymers Cumulenes Anions Macrocycles Steroids Cyanides Annulenes Mannich bases Sulfonamides Cyanines Arenes Medium-ring compounds Sulfur heterocycles Cyclodextrins Arynes Metallacycles Surfactants Cyclophanes Azides Terpenoids Dendrimers Natural products Azo compounds Diazo compounds Nitrogen heterocycles Ylides Azomethine ylides Dyes/Pigments Oxygen heterocycles Zwitterions

Organic Chemistry: Methodology and Reactions

Cross-coupling

Acylation

Aldol reactions Cyclization Hydrosilylation Protonation Alkylation Cycloaddition Hydrostannation Radical reactions Cyclotrimerization Hydroxylation Allylation Rearrangement Amination Dehydrogenation Immobilization Reduction Annulation Dihydroxylation Insertion Retro reactions Aromatic substitution Dimerization Ionic liquids Ring contraction Aromaticity Domino reactions Isomerization Asymmetric amplification Electrocyclic reactions Lithiation Ring expansion Electrophilic addition Asymmetric catalysis Metalation Sigmatropic rearrangement Electrophilic substitution Asymmetric synthesis Michael addition Solid-phase synthesis Automerization Elimination Molecular diversity Solvent effects Autoxidation Ene reaction Multicomponent reactions Solvolysis Biomimetic synthesis **Epoxidation** Nucleophilic addition Steric hindrance C-C activation Flash pyrolysis Nucleophilic substitution Substituent effects C-C coupling Glycosylation Olefination Grignard reaction C-H activation Oligomerization Synthesis design C1 building blocks Halogenation Oxidation Synthetic methods Oxygenation Carbonylation Heck reaction Template synthesis Carboxylation Ozonolysis High-pressure chemistry Topochemistry Chiral auxiliaries Hydroamination Perfluorinated solvents Total synthesis Chiral pool Hydroboration Pericyclic reaction Transesterification Cleavage reactions Hydroformylation Phosphorylation

Hydrolysis

Photooxidation

Polymerization

Hydrogen transfer

Hydrogenation

Umpolung

Wittig reactions

Combinatorial chemistry

Cracking

Organic Chemistry: Stereochemistry and Structures

Strained molecules Atropisomerism Configuration determination Enantioselectivity Chemoselectivity Conformation analysis Hyperconjugation Structure elucidation Chiral resolution Conjugation Kinetic resolution Tautomerism

Chirality Diastereoselectivity Regioselectivity Valence isomerization

Physical Chemistry and Chemical Physics (including Electrochemistry, Kinetics, Photochemistry, Radiochemistry, Thermodynamics and Theoretical Chemistry)

Ab initio calculations Electron transfer Langmuir-Blodgett films Plasma chemistry Absorption ELF (Electron Localization Laser chemistry Polarized spectroscopy **Ouantum** chemistry Acidity Function) Lewis acids Adsorption Radiochemistry Energy conversion Lewis bases Basicity Exchange interactions Linear free energy relationships Radiopharmaceuticals **Biophysics** Femtochemistry Liquid crystals Reaction mechanisms Bond energy Fluorescence Liquids Reactive intermediates Bond theory Fluorescent probes Low-temperature studies Redox chemistry Calorimetry Magnetic properties Fractals Salt effect

FRET (Fluorescence Resonance CARS (Coherent Matrix isolation Semiempirical calculations

Anti-Stokes Raman Scattering) Energy Transfer) Mesophases Single-molecule studies Charge-carrier injection Gas-phase reactions Metallomesogens Singlet oxygen Charge transfer Gels Metastable compounds Sol-gel processes Chemisorption Glasses Microreactors Solvatochromism Chromophores Group theory Molecular dynamics Spin crossover Heats of formation Molecular electronics Colloids Statistical mechanics Computer chemistry High-pressure chemistry Molecular modeling Statistical thermodynamics Structure-activity relationships

High-temperature chemistry Conducting materials Monolayers Conical intersections Hot-atom chemistry Nanotechnology Superacidic systems Crystal engineering Hydrophobic effect Neighboring-group effects Supercritical fluids Crystal growth Imaging agents Nonequilibrium processes Thermochemistry Cyclic voltammetry Ion pairs Phase diagrams Thermodynamics

Density functional calculations Ion-molecule reactions Phase transitions Time-resolved spectroscopy

Photochemistry Transition states Donor-acceptor systems Ionization potentials Doping Isotope effects Photochromism Viruses Isotopes Photolysis Voltammetry Electrochemistry Electron microscopy Kinetics Physisorption

Supramolecular Chemistry

Aggregation Molecular evolution Pi interactions Self-assembly

Host-guest systems Molecular recognition Receptors Supramolecular chemistry Molecular devices Nanostructures