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354. Palladium-Catalyzed Cross-Coupling Reactions with Zinc, Boron, and Indium Exhibiting High Turnover Numbers (TONs): Use of Bidentate Phosphines and Other Critical Factors in Achieving High TONs.

355. A Quarter of a Century of Explorations in Organozirconium Chemistry.

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370. C–C Bond Formation (Part 1) by Addition Reactions: Through Carbometallation Mediated by Group 4-7 Metals

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377. 1,4-Pentenynes as a Five-Carbon Synthon for Efficient and Selective Syntheses of Natural Products Containing 2,4-Dimethyl-1-penten-1,5-ylidene and Related Moieties by Means of Zr-Catalyzed Carboalumination of Alkynes and Alkenes.


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384. AlCl₃-Promoted Facile E-to-Z Isomerization Route to (Z)-2-Methyl-1-buten-1,4-ylidene Synthons for Highly Efficient and Selective (Z)-Isoprenoid Synthesis.
*Note:* Invited contribution to a special issue dedicated to Alain Krief.

*Note:* Invited contribution to the 50th Anniversary Issue.


387. Synthesis of 1,3-Dienes by Metal-Mediated Coupling Reactions.

388. Synthesis of Alkenes from Alkynes by Hydrometallation and Subsequent Coupling Reactions.

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392. Total Synthesis of (+)-Scyphostatin Featuring an Enantioselective and Highly Efficient Route to the Side-Chain via Zr-Catalyzed Asymmetric Carboalumination of Alkenes (ZACA).
**Note**: This article is part of a ChemComm Catalysis in Organic Synthesis web-theme issue.

393. Highly (≥98%) Selective Trisubstituted Alkene Synthesis of Wide Applicability via Fluoride-Promoted Pd-Catalyzed Cross-Coupling of Alkenylboranes.
**Note**: An invited publication for a special issue of *Isr. J. Chem.*

394. Highly Stereoselective Total Synthesis of Fully Hydroxy-Protected Mycolactones A & B and Their Stereoisomerization upon Deprotection.

395. Discovery of ZACA Reaction: Zr-Catalyzed Asymmetric Carboalumination of Alkenes.
**Note**: An invited publication for a special issue dedicated to U. M. Dzhemilev.

396. Highly (≥98%) Selective Synthesis of Conjugated Dienoic and Trienoic Esters via Alkyne Elementometalation – Pd-Catalyzed Cross-Coupling.

397. Highly (≥98%) Stere- and Regioselective Trisubstituted Alkene Synthesis of Wide Applicability via 1-Halo-1-alkyne Hydroboration – Tandem Negishi-Suzuki Coupling or Organoborate Migratory Insertion.


399. Synthesis of Feebly Chiral 2-Branched 1-Alkanols of Ultra-High Enantiomeric Purity (>99% ee)
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MISC-13 Historical Background of Organopalladium Chemistry.

MISC-14 Background for Chapter II.

MISC-15 Metallic Pd and Its Mixtures.

MISC-16 Palladium Complexes Containing Halogen and Oxygen Ligands.

MISC-17 Pd(0) and Pd(II) Complexes Containing Phosphorus and Other Group 15 Atom Ligands.

MISC-18 Background for Chapter III.


Background for Chapter V.


Background for Chapter VI.


Background for Chapter VII.


Background for Chapter VIII.


Background for Chapter IX.


General Guidelines on References Pertaining to Palladium and Organopalladium Chemistry.


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MISC-30 Goma-ae with White Sesame and Goma-yagoshi with Black Sesame.


MISC-34 Yume o Mochitsuzukeyo (in Japanese).
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MISC-35 Research Philosophy of Ei-ichi Negishi, Ph.D., a 2010 Nobel Prize Winner in Chemistry (Based on an interview, March 6, 2011, in Japanese)
MISC-36 Magical Power of Transition Metal Catalysts (in Japanese)

E. Negishi.


MISC-39 Let’s Meet in the Hall: Guest – Ei-ichi Negishi, a 2010 Nobel Prize Winner in Chemistry (Based on an interview in Japanese).

MISC-40 EI-ICHI NEGISHI (Autobiographical Part of Nobel Lecture (EN No. 400).

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**Note:** See also an accompanying memoire by T. Takahashi, p. 26-29.


MISC-44 Catalysis with $d$-Block Transition Metals for Green Organic Synthesis and a Sustainable World.


PATENTS


