IR Organometallics

Research Topic task started on Mon Aug 28, 2006 at 5:39 PM

5 Research Topic candidates were identified in CAPLUS and MEDLINE.

using the phrase "IR and organometallic"

Selected 1 of 5 candidate topics.

85 references were found containing **"IR and organometallic"** as entered.

Refine by Document Type started

18 references were found when refined by Document Type **"Review"**

Task History

IR Organometallics

Answer 1:

Bibliographic Information

Time-resolved infrared spectroscopy in supercritical fluids. George, Michael W.; Poliakoff, Martyn; Sun, Xue-Zhong; Grills, David C. School of Chemistry, University of Nottingham, Nottingham, UK. Laser Chemistry (1999), 19(1-4), 133-139. Publisher: Harwood Academic Publishers, CODEN: LSCHDB ISSN: 0278-6273. Journal; General Review written in English. CAN 134:48606 AN 2000:763914 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

We have used fast time-resolved IR Spectroscopy (TRIR) to probe organometallic reactions in supercrit. fluids on the nanosecond time-scale. This has allowed us to identify organometallic noble gas complexes which are formed following irradn. of metal carbonyls in supercrit. noble gas soln. These complexes are surprisingly stable and have comparable reactivity to organometallic alkane complexes. We have also studied the co-ordination of CO2 to metal centers in supercrit. CO2 and provide the first evidence for the formation and reactivity of η1-O bound metal CO2 complexes in soln. at or above room temp. A review of the authors' work with 10 refs.

Answer 2:

Bibliographic Information

Time-resolved infrared spectroscopy in studies of organometallic excited states and reactive intermediates. Ford, Peter C.; Bridgewater, Jon S.; Lee, Brian. Dep. Chemistry, Univ. California, Santa Barbara, CA, USA. Photochemistry and Photobiology (1997), 65(1), 57-64. Publisher: American Society for Photobiology, CODEN: PHCBAP ISSN: 0031-8655. Journal; General Review written in English. CAN 126:192791 AN 1997:56615 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

This article provides a brief overview of time-resolved IR spectroscopy (TRIR) applied to the investigation of organometallic photochem. in soln. In this context, some fundamental problems where flash photolysis TRIR techniques may provide information relevant to photochem. pathways and to certain thermal reaction mechanisms are described. Different approaches to obtaining TRIR spectral information are summarized and illustrated with specific applications. A review with 33 refs.

Answer 3:

Bibliographic Information

Structure and reactivity of surface species obtained by interaction of organometallic compounds with oxidic surfaces: IR studies. Zecchina, Adriano; Arean, Carlos Otero. Dip. Chim. Inorg., Chim. Fis. Chim. Mater., Univ. Torino, Turin, Italy. Catalysis Reviews - Science and Engineering (1993), 35(2), 261-317. CODEN: CRSEC9 ISSN: 0161-4940. Journal; General Review written in English. CAN 119:103828 AN 1993:503828 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

IR Organometallics

Abstract

A review with 235 refs.

Answer 4:

Bibliographic Information

Fast and ultrafast processes in organometallic chemistry. Turner, J. J. Dep. Chem., Univ. Nottingham, Nottingham, UK. Springer Proceedings in Physics (1992), 68(Time-Resolved Vib. Spectrosc. V), 89-92. CODEN: SPPPEL ISSN: 0930-8989. Journal; General Review written in English. CAN 118:80966 AN 1993:80966 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

A review with >31 refs.

Answer 5:

Bibliographic Information

Spectroscopic investigations of organometallic photochemistry in supercritical fluids. Howdle, Steven M.; Jobling, Margaret; Poliakoff, Martyn. Dep. Chem., Univ. Nottingham, Nottingham, UK. ACS Symposium Series (1992), 488(Supercrit. Fluid Technol.), 121-31. CODEN: ACSMC8 ISSN: 0097-6156. Journal; General Review written in English. CAN 117:26601 AN 1992:426601 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

A review with 23 refs. IR spectroscopy is used to monitor photochem. reactions of organometallic mols. in supercrit. fluids at near ambient temps., e.g. scXe, scCO2, and scC2H4 (s.c. = supercrit.). The ability to create high concns. of reactant gases in supercrit. fluids has been exploited to generate so-called non-classical dihydrogen complexes such as W(CO)5(H2) and CpMn(CO)2(H2). The unique spectroscopic transparency of scXe allows these species to be identified using FTIR spectroscopy. Photochem. reactions in scC2H4 are also discussed, and a method for recovering compds. from reactors is outlined.

Answer 6:

Bibliographic Information

Time-resolved kinetics of organometallic reactions in the gas phase by transient infrared absorption spectrometry. Weiller, Bruce H.; Grant, Edward R. Dep. Chem., Purdue Univ., West Lafayette, IN, USA. Editor(s): Russell, David H. Gas Phase Inorg. Chem. (1989), 227-44. Publisher: Plenum, New York, N. Y CODEN: 56OEAJ Conference; General Review written in English. CAN 111:174161 AN 1989:574161 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

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Abstract

A review contg. 60 refs. on methods and results of gas-phase organometallic transient IR spectroscopy. Included is a study of the gas phase CO-for-C2H4 dissociative substitution kinetics of Cr(CO)4(C2H4)2.

Answer 7:

Bibliographic Information

Molecular organometallic chemistry and catalysis on metal-oxide surfaces. Gates, B. C. Dep. Chem. Eng., Univ. Delaware, Newark, DE, USA. Springer Series in Surface Sciences (1986), 5(Chem. Phys. Solid Surf. 6), 49-71. CODEN: SSSSEW ISSN: 0931-5195. Journal; General Review written in English. CAN 110:212866 AN 1989:212866 CAPLUS

Abstract

A review contg. 47 refs.

Answer 8:

Bibliographic Information

New methods for acquiring IR spectral data in organometallic chemistry and catalysis. Darensbourg, Donald J.; Gibson, Guy. Dep. Chem., Texas A and M Univ., College Station, TX, USA. ACS Symposium Series (1987), 357(Exp. Organomet. Chem.), 230-48. CODEN: ACSMC8 ISSN: 0097-6156. Journal; General Review written in English. CAN 108:121075 AN 1988:121075 CAPLUS

Abstract

A review with 16 refs. The advent of new IR sampling accessories allowed in situ study of organometallic systems under conditions that were previously not readily accessible. The techniques of cylindrical internal reflectance (CIR) and diffuse reflectance spectroscopies are described. The CIR phenomenon was employed in 3 different app. Two different high pressure CIR cells were used to study reactions homogeneously catalyzed by [μ-HW2(CO)10]-. Low temp. reactions of Mo and W complexes were studied using an ambient pressure CIR cell. The diffuse reflectance technique was employed to study powd. samples of Ru carbonyl complexes supported on Al2O3.

Answer 9:

Bibliographic Information

Infrared spectroscopy of organometallic intermediates. Turner, James J.; Healy, Michael A.; Poliakoff, Martyn. Dep. Chem., Univ. Nottingham, Nottingham, UK. ACS Symposium Series (1987), 333(High Energy Processes Organomet. Chem.), 110-22. CODEN: ACSMC8 ISSN: 0097-6156. Journal; General Review written in English. CAN

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106:204155 AN 1987:204155 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

A review with 53 refs. IR spectroscopy is a powerful spectroscopic technique for examg. the structure and behavior of intermediates involved in organometallic photochem. Examples are given of the combination of IR spectroscopy with matrix isolation, with liq. noble gases as solvents, and with flash generation, for probing novel transients and intermediates.

Answer 10:

Bibliographic Information

Contribution of high-precision electron density measurement methods to vibrational spectroscopy. Application to coordination compounds. Nguyen Quy Dao. Lab. Chim. Phys. Chim. Miner., Ec. Cent. Arts Manuf., Chatenay-Malabry, Fr. Bulletin de la Societe Chimique de France (1982), (9-10, Pt. 1), 307-17. CODEN: BSCFAS ISSN: 0037-8968. Journal; General Review written in French. CAN 98:115876 AN 1983:115876 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

A review, with 36 refs., is given on the study of chem. bonds in organometallic compds. by x-ray and neutron diffraction methods and vibrational spectroscopy (IR, Raman, inelastic neutron scattering). The principles of charge-d. detn. in an organometallic compd. are discussed.

Answer 11:

Bibliographic Information

Vibrational spectra of some coordinated ligands. Davidson, G. Univ. Nottingham, Nottingham, UK. Spectroscopic Properties of Inorganic and Organometallic Compounds (1981), 14 236-302. CODEN: SPIOAD ISSN: 0584-8555. Journal; General Review written in English. CAN 96:207503 AN 1982:207503 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

A review, with 380 refs. (1980), of the IR and Raman spectra of coordinated ligands in inorg. and organometallic compds.

Answer 12:

Bibliographic Information

Vibrational spectra of transition-element compounds. Ogden, J. S. Univ. Southampton, Southampton, UK. Spectroscopic Properties of Inorganic and Organometallic Compounds (1981), 14 213-35. CODEN: SPIOAD ISSN: 0584-8555. Journal; General Review written in English. CAN 96:207502 AN 1982:207502 CAPLUS (Copyright (C)

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Abstract

A review, with 413 refs. (1980), of the IR and Raman spectra of inorg. and organometallic transition-metal compds.

Answer 13:

Bibliographic Information

Characteristic vibrations of main-group element compounds. Cradock, S. Univ. Edinburgh, Edinburgh, UK. Spectroscopic Properties of Inorganic and Organometallic Compounds (1981), 14 198-212. CODEN: SPIOAD ISSN: 0584-8555. Journal; General Review written in English. CAN 96:207501 AN 1982:207501 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

A review, with 227 refs. (1980), of the IR and Raman spectra of inorg. and organometallic compds. of main group elements.

Answer 14:

Bibliographic Information

Vibrational spectra of small symmetric species; single-crystal and other solid-state spectroscopy. Adams, D. M.; Hatton, P. D. Dep. Chem., Univ. Leicester, Leicester, UK. Spectroscopic Properties of Inorganic and Organometallic Compounds (1981), 14 173-97. CODEN: SPIOAD ISSN: 0584-8555. Journal; General Review written in English. CAN 96:207500 AN 1982:207500 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

A review, with 300 refs. (1980), of the IR and Raman spectra of small sym. inorg. and organometallic compds.

Answer 15:

Bibliographic Information

Vibrational spectra of some coordinated ligands. Davidson, G. Univ. Nottingham, Nottingham, UK. Spectroscopic Properties of Inorganic and Organometallic Compounds (1980), 13 265-327. CODEN: SPIOAD ISSN: 0584-8555. Journal; General Review written in English. CAN 95:41595 AN 1981:441595 CAPLUS (Copyright (C) 2006 ACS on SciFinder (R))

Abstract

IR Organometallics

A review, with 406 refs., of the vibrational spectra of inorg. and organometallic coordination compds.

Answer 16:

Bibliographic Information

Vibrational spectroscopy of some organometallic compounds of actinides. Goffart, Jean. Lab. Radiochem., Univ. Liege, Liege, Belg. NATO Advanced Study Institutes Series, Series C: Mathematical and Physical Sciences (1979), Volume Date 1978, 44(Organomet. f-Elem.), 467-96. CODEN: NASCD6 ISSN: 0377-2071. Journal; General Review written in English. CAN 91:210406 AN 1979:610406 CAPLUS

Abstract

A review with 78 refs.

Answer 17:

Bibliographic Information

[IR translation bands of] ionic organometallic solutions. Edgell, Walter F. Dep. Chem., Purdue Univ., West Lafayette, IN, USA. Practical Spectroscopy (1977), 1(Infrared Raman Spectrosc., Pt. A), 279-345. CODEN: PSPED9 ISSN: 0148-9054. Journal; General Review written in English. CAN 87:124696 AN 1977:524696 CAPLUS

Abstract

A review with 29 refs.

Answer 18:

Bibliographic Information

Spectroscopic properties of inorganic and organometallic compounds. Greenwood, N. N.; Akitt, J. W.; Crosbie, K. D.; Dobbie, R. C.; Errington, W.; Gibb, T. C.; Straughan, B. P. Dep. Inorg. Chem., Univ. Newcastle-upon-Tyne, Newcastle-upon-Tyne, UK. Spectroscopic Properties of Inorganic and Organometallic Compounds (1970), 3 500 pp. CODEN: SPIOAD ISSN: 0584-8555. Journal; General Review written in English. CAN 79:25086 AN 1973:425086 CAPLUS

Abstract

A review with many refs. describes the NMR, NQR, ESR, microwave, ir, Raman, electronic, and Moessbauer spectroscopic properties of inorg. and organometallic compds. reported in 1969.