



## Publications of François Garin, or a life that was not a dimension that one must go, but a battle

### *Publications de François Garin, ou une vie qui n'était pas une dimension à parcourir, mais une bataille*

François Garin is widely acclaimed both in France and worldwide as an author of scientific papers. *In concreto*, he has published approximately 160 original papers on different subjects in international journals and a number of reviews and book chapters. He has lectured at 189 French and international level conferences as a presenter or an invited lecturer.

He has mentored 39 doctoral students, and the majority of his original papers were written as collaborations. Through his efforts, long lists of research students have received training in a scientific method that cannot be surpassed. All who worked with him have been attracted by his genial and kind personality, and none failed to be impressed by his intellect and by the high, almost exacting, standards he set for scientific work.

In his chosen field of structured nanomaterials, where he has investigated aspects of their preparation, characterization, and catalytic properties related to chemical kinetics, François Garin is pre-eminent and has established a tradition that will not be easily upheld. Through his work, he is assured of a worthy place in the history of the science to which he was devoted.

François Garin has proven that all boundaries can be broken by the desire to succeed, thereby confirming Euripidean philosophies, which state that great things happen with great force.

#### 1. Publications (1975–2014)

1 The mechanisms of hydrogenolysis and isomerization of hydrocarbons on metals. VIII. Isomerization of  $^{13}\text{C}$ -labeled pentanes on a 10% Pt–Al<sub>2</sub>O<sub>3</sub> catalysts

Journal of the American Chemical Society 97 (1975) 4466–4476

F. Garin and F.G. Gault

2 Skeletal rearrangements of hydrocarbons on metals  
Bulletin des Sociétés chimiques belges 88 (1979) 475–495

F.G. Gault, V. Amir-Ebrahimi, F. Garin, P. Parayre, F. Weisang

3 Mechanisms of skeletal isomerization of hydrocarbons on metals

Nouveau Journal de Chimie 3 (1979) 529–532

V. Amir-Ebrahimi, F. Garin, F. Weisang, F.G. Gault

4 Skeletal rearrangements of hydrocarbons on metals with various particle sizes

Growth and Properties of Metal Clusters, J. Bourdon (Editor), 1980, pp. 451–466

F.G. Gault, F. Garin, G. Maire

5 Skeletal isomerization of hydrocarbons on metals

In: Chemistry and Chemical Engineering of Catalytic Processes. Edited by R. Prins and G.C.A. Schuit, Sijthoff-Noordhoff, The Netherlands, 1980, pp. 51–380

F. Garin and F.G. Gault

6 Isomerization of  $^{13}\text{C}$ -labeled hexanes on Pt/Al<sub>2</sub>O<sub>3</sub> and on "organometallic cluster derived" catalysts. Effect of the metal particle size

Surface Science 106 (1981) 466–471

F. Garin, O. Zahraa, C. Crouzet, J.L. Schmitt, G. Maire, F.G. Gault

7 1–3 Bond-shift isomerization of methylpentanes on iridium catalysts

Journal of Catalysis 70 (1981) 215–220

F. Garin, P. Girard, F. Weisang, G. Maire

8 Hydrogénolyse et isomérisation des hydrocarbures sur métaux. I. Hydrogénolyse des pentanes sur catalyseur 0.2 Pt–Al<sub>2</sub>O<sub>3</sub>

- Nouveau Journal de Chimie 5 (1981) 553–561  
F. Garin, F.G. Gault, G. Maire
- 9 Mécanismes d'hydrogénolyse et d'isomérisation des hydrocarbures sur métaux II. Isomérisation des pentanes marqués au carbone 13 sur catalyseur 0.2 Pt–Al<sub>2</sub>O<sub>3</sub>  
Nouveau Journal de Chimie 5 (1981) 563–573  
F. Garin, G. Maire, F.G. Gault
- 10 Skeletal rearrangements of hydrocarbons on “ideal surfaces” (single crystals), “classical” and “inorganic complexes derived” catalysts of platinum  
Journal de Chimie physique 78 (1981) 951–959  
G. Maire, O. Zahraa, F. Garin, C. Crouzet, S. Aeiyaeh, P. Légaré, P. Braunstein
- 11 Selectivity in mechanistic studies of alkanes on “classical” and “inorganic cluster derived” platinum catalysts  
Faraday Discussions of the Chemical Society: Selectivity in Heterogeneous Catalysis 72 (1981) 45–52  
O. Zahraa, F. Garin, G. Maire
- 12 Isomerization and hydrogenolysis of C6 alkanes on Pt–Al<sub>2</sub>O<sub>3</sub> catalysts and Pt single crystal faces  
Journal of Catalysis 77 (1982) 323–337  
F. Garin, S. Aeiyaeh, P. Légaré, G. Maire
- 13 Isomerization and hydrogenolysis of hexanes on an alumina-supported Pt–Ru catalyst  
Journal of Catalysis 82 (1983) 13–25  
G. Diaz, F. Garin, G. Maire
- 14 The skeletal rearrangements of <sup>13</sup>C-labeled hexanes on Pt–Ni bulk alloys  
Journal of Molecular Catalysis 25 (1984) 183–191  
S. Aeiyaeh, F. Garin, L. Hilaire, P. Légaré, G. Maire
- 15 Metal catalysed skeletal reactions of hydrocarbons  
In: Catalysis: Science and Technology, J.R. Anderson and M. Boudart (Eds.), Vol. 6 Springer Verlag, Berlin, 1984, pp. 162–226  
G. Maire and F. Garin
- 16 Influence de la structure cristalline et des ajouts sur des catalyseurs Pt/TiO<sub>2</sub> pour l'isomérisation des hexanes  
Bulletin de la Société chimique de France 3 (1985) 336–340  
A. Dauscher, F. Garin, G. Maire
- 17 Réaction de contact des méthylpentanes sur catalyseurs bimétalliques Pt–Co/Al<sub>2</sub>O<sub>3</sub> ; caractérisation physique des catalyseurs (EXAFS)  
Bulletin de la Société chimique de France 3 (1985) 341–345  
S. Zyade, F. Garin, L. Hilaire, M.F. Ravet, G. Maire
- 18 Characterization and co hydrogenation activity of Pt–Ru/Al<sub>2</sub>O<sub>3</sub> bimetallic catalysts  
C1 Molecular Chemistry, Vol. I, 1985, pp. 335–348  
K. Matusek, I. Bogyay, L. Gucci, G. Diaz, F. Garin, G. Maire
- 19 Carbon monoxide hydrogenation on Co–Ir/Al<sub>2</sub>O<sub>3</sub> bimetallic catalysts  
C1 Molecular Chemistry, Vol. I, 1986, pp. 355–368  
L. Gucci, K. Matusek, I. Bogyay, F. Garin, P. Esteban Puges, P. Girard, G. Maire
- 20 Note on a dynamic study of a complete catalytic process by X-ray absorption spectroscopy in dispersive mode: application to Ir–Cu/Al<sub>2</sub>O<sub>3</sub> catalysts  
Applied Catalysis 26 (1986) 305–312  
G. Maire, F. Garin, P. Bernhardt, P. Girard, J.-L. Schmitt, E. Dartyge, H. Dexpert, A. Fontaine, A. Jucha, P. Lagarde
- 21 Hydrogenolysis of carbon–carbon bonds on platinum based bimetallic catalysts  
In: “Studies in Surface Science and Catalysis” Advisory (Eds): B. Delmon, J.T. Yates, Catalytic Hydrogenation, L. Cerveny (editor), Vol. 27 Elsevier, Amsterdam, 1986, pp. 145–199  
F. Garin, L. Hilaire, G. Maire
- 22 Skeletal isomerization of hydrocarbons on molybdenum catalysts. Part II: catalytic study of unsupported catalysts: film and powder  
Journal of Catalysis 104 (1987) 211–224  
Y. Holl, F. Garin, G. Maire, A. Muller, P.A. Engelhard, J. Grosmanjin
- 23 Skeletal isomerization of hydrocarbons on molybdenum catalysts. Part III: catalytic study of alumina-supported catalysts  
Journal of Catalysis 104 (1987) 225–232  
Y. Holl, F. Garin, G. Maire, A. Muller, P.A. Engelhard, J. Grosmanjin
- 24 Isomerization and hydrogenolysis mechanisms of C6 alkanes on bimetallic platinum–cobalt systems  
New Journal of Chemistry 11 (1987) 429–435  
S. Zyade, F. Garin, G. Maire
- 25 Correlations between the surface structure of platinum single crystals and hydrocarbon skeletal rearrangement mechanisms approach to the nature of the active sites  
Journal of Catalysis 105 (1987) 233–244  
A. Dauscher, F. Garin, G. Maire
- 26 On the nature of catalytic active sites on molybdenum catalysts  
Journal of Catalysis 113 (1988) 569–571  
Y. Holl, F. Garin, G. Maire
- 27 Characterization of the standard platinum/silica catalyst – Euro-Pt-1. VI. Catalytic properties  
Applied Catalysis 41 (1988) 313–335  
G.C. Bond, F. Garin, G. Maire
- 28 Mechanisms of skeletal rearrangements of hydrocarbons on metal: elementary steps  
Journal of Molecular Catalysis 48 (1988) 99–116  
G. Maire and F. Garin
- 29 Studies of skeletal rearrangements of labeled hexanes on iridium and iridium–cobalt catalysts: correlations between the product distributions and some structural information on the catalysts given by EXAFS  
Journal of Catalysis 114 (1988) 153–166  
P. Esteban Puges, F. Garin, F. Weisang, P. Bernhardt, P. Girard, G. Maire, L. Gucci, Z. Schay

- 30 Effect of pretreatment conditions on hydrocarbon reactions on alumina-supported molybdenum catalysts  
*Applied Catalysis* 46 (1989) 57–68  
Y. Holl, F. Garin, G. Maire, F. Borg, P.A. Engelhard, J. Grosmanin
- 31 Possible surface intermediates in alkane reactions on metallic catalysts  
*Accounts of Chemical Research* 22 (1989) 100–106  
F. Garin and G. Maire
- 32 Correlations between the surface structure of bimetallic or alloy catalysts and hydrocarbon skeletal rearrangement mechanisms: approach to the nature of the active sites and to the reaction intermediates  
*Journal of Molecular Catalysis* 52 (1989) 14–167  
F. Garin and G. Maire
- 33 The hydrogenolysis of ethane over Re–Pt (III) and Pt–Re (0001) bimetallic crystal surfaces  
*Journal of Catalysis* 117 (1989) 144–154  
D.J. Godbey, F. Garin, G.A. Somorjai
- 34 Action de divers additifs sur la stabilité thermique de la texture de l'alumine gamma  
*Ann. Chim. Fr.* 14 (1989) 209–219  
J.M. Schwaller, P. Wehrer, F. Garin, G. Maire
- 35 Part I: studies of alumina-supported Pt–Ru catalysts by in situ X-ray absorption spectroscopy  
*Journal de Chimie physique* 86 (1989) 1727–1739  
P. Esteban, G. Diaz, L. Guzzi, F. Garin, P. Bernhardt, J.L. Schmitt, G. Maire
- 36 Part II: studies of alumina-supported Pt–Ru catalysts by in situ X-ray absorption spectroscopy and electronic microscopy. Approach to the active center in skeletal rearrangement of hexanes  
*Journal de Chimie physique* 86 (1989) 1741–1750  
G. Diaz, P. Esteban, L. Guzzi, F. Garin, P. Bernhardt, J.L. Schmitt, G. Maire
- 37 EXAFS characterization and catalytic properties of alumina-supported iridium catalysts derived from  $\text{Ir}_2(\mu\text{-Cl})_2(\text{COD})_2$   
*Journal de Chimie physique* 86 (1989) 1777–1785  
P. Esteban, J. Real, J.C. Bayon, H. Dexpert, D. Bazin, F. Garin, P. Girard, G. Maire
- 38 Kinetics of reactions catalysed by metals: role of surface hydrocarbon residues in conversions of alkanes on Pt.  
*Journal of Molecular Catalysis* 58 (1990) 185–197  
F. Garin, G. Maire, S. Zyade, P. Zielinski, M.N. Zauwen, A. Frennet
- 39 Modifications of platinum model catalysts by sulphur: effect on reactions of labelled hexanes  
*J. Chem. Soc. Faraday Trans.* 86 (1990) 2719–2724  
G. Maire, G. Lindauer, F. Garin, P. Légaré, M. Cheval, M. Vayer
- 40 Structure and catalytic activity of alumina-supported Pt–Co bimetallic catalysts. 2 – Chemisorption and catalytic reactions  
*Journal of Physical Chemistry* 95 (1991) 802–808  
L. Guzzi, T. Hoffer, Z. Zsoldos, S. Zyade, G. Maire, F. Garin
- 41 Role of tungsten in supported Pt–W reforming catalysts. Part I. Modification of platinum activity and selectivity by addition of tungsten  
*Catalysis Letters* 10 (1991) 391–400  
J.S. M'Boungou, J.L. Schmitt, G. Maire, F. Garin
- 42 Role of tungsten in supported Pt–W reforming catalysts. Part II. Influence of the tungsten loading and metal-support interactions effect  
*Catalysis Letters* 10 (1991) 401–412  
J.S. M'Boungou, L. Hilaire, G. Maire, F. Garin
- 43 Conversion of butane over the solid superacid  $\text{ZrO}_2/\text{SO}_4^{2-}$  in the presence of hydrogen  
*Journal of Catalysis* 131 (1991) 199–203  
F. Garin, D. Andriamasinoro, A. Abdulsamad, J. Sommer
- 44 Réactions de reformage des hexanes sur un catalyseur à 0.2 % de Pt sur  $\text{Al}_2\text{O}_3$  irradié par un champ microonde  
*Journal de Chimie physique* 89 (1992) 1427–1439  
J.M. Thiébaud, G. Roussy, M. Medjram, L. Seyfried, F. Garin, G. Maire
- 45 Hydrocarbon reactions on an oxidized platinum silicon alloy model catalyst  
*Catalysis Today* 12 (1992) 201–210  
G. Maire, P. Légaré, S. Aeiyaich, F. Garin
- 46 Reactions of labelled hexanes on Pt– $\text{WO}_3$  catalysts  
*Journal of Catalysis* 139 (1993) 256–267  
J.M. Farbotko, F. Garin, P. Girard, G. Maire
- 47 Reactivity of Pt/ $\text{Al}_2\text{O}_3$  and Pt– $\text{CeO}_2/\text{Al}_2\text{O}_3$  catalysts for the oxidation of carbon monoxide by oxygen. I – catalyst characterisation by TPR using Co as reducing agent  
*Journal of Catalysis* 141 (1993) 1–8  
C. Serre, F. Garin, G. Belot, G. Maire
- 48 Reactivity of Pt/ $\text{Al}_2\text{O}_3$  and Pt– $\text{CeO}_2/\text{Al}_2\text{O}_3$  catalysts for the oxidation of carbon monoxide by oxygen. II – Influence of the pretreatment step on the oxidation mechanism  
*Journal of Catalysis* 141 (1993) 9–20  
C. Serre, F. Garin, G. Belot, G. Maire
- 49 Durable changes of the catalytic properties of alumina-supported platinum induced by microwave irradiation  
*Catalysis Letters* 21 (1993) 133–138  
J.M. Thiébaud, G. Roussy, M.S. Medjram, F. Garin, L. Seyfried, G. Maire
- 50 Catalytic behaviour for skeletal rearrangement of hydrocarbons and surface structures of silica and alumina-supported Pt–Mo catalysts  
*Journal of Molecular Catalysis* 85 (1993) 75–95  
C. Petit, A. Katrib, P. Girard, F. Garin, G. Maire
- 51 Caractérisation des solides catalytiques par des réactions tests. Cas des métaux. Corrélation entre mécanismes de réaction et structure des catalyseurs

- Actes du 2<sup>e</sup> colloque franco-maghrébin de catalyse, Sidi Fredj, 199, Editeurs: M. Bettahar, A. Azzouz et J. Barbier.  
Journal de la Société algérienne de Chimie 1 (1993) 143–200  
F. Garin
- 52 Microwave electromagnetic field effects on reforming catalysts. I – Higher selectivity in 2-methylpentane isomerisation on alumina-supported Pt catalysts  
Journal of Catalysis 148 (1994) 281–287  
L. Seyfried, F. Garin, G. Maire, J.M. Thiébaud, G. Roussy
- 53 Zeolite Y-catalyzed versus superacid-catalyzed protium-deuterium exchange in alkanes  
Journal of the American Chemical Society 116 (1994) 5491–5492  
J. Sommer, M. Hachoumy, F. Garin, D. Barthomeuf
- 54 A skeletal rearrangement study of labelled butanes on a solid superacid catalyst: sulfuric acid treated zirconium oxide  
Journal of Catalysis 151 (1995) 26–32  
F. Garin, L. Seyfried, P. Girard, G. Maire, A. Abdulsamad, J. Sommer
- 55 Hydrogenolysis of methylcyclopentane and isomerization of 2-methylpentane over well characterized silica-supported platinum-ruthenium catalysts  
Applied Catalysis A 124 (1995) 33–46  
G. Diaz, F. Garin, G. Maire, S. Alerasool, R.D. Gonzalez
- 56 Hydrogenolysis of *n*-heptane over Ni–Th system. Kinetic and mechanistic studies  
New Journal of Chemistry 19 (1995) 375–382  
O. Zahraa and F. Garin
- 57 Catalytic activity of bulk tungsten carbides for alkane reforming. I – Characterization and catalytic activity for reforming of hexane isomers in the absence of oxygen  
Journal of Catalysis 153 (1995) 9–16
- 58 V. Keller, P. Wehrer, F. Garin, R. Ducros, G. Maire  
On the development of metallic particles and their initial catalytic properties in the CO + H<sub>2</sub> reaction over Co/Al<sub>2</sub>O<sub>3</sub> catalyst  
Catalysis Letters 33 (1995) 39–48  
Z. Zsoldos, F. Garin, L. Hilaire, L. Guzzi
- 59 Alkene formation during low temperature, alkane activation on various solid acids and superacids  
Journal of the American Chemical Society 117 (1995) 1135–1136
- 60 J. Sommer, M. Hachoumy, F. Garin, D. Barthomeuf, J. Vedrine  
Genesis of cobalt oxide-induced surface structure in PtCo<sub>x</sub>/Al<sub>2</sub>O<sub>3</sub> catalysts  
Journal of Molecular Catalysis A 111 (1996) 113–122  
Z. Zsoldos, F. Garin, L. Hilaire, L. Guzzi
- 61 A comparative study of LaCoO<sub>3</sub>, Co<sub>3</sub>O<sub>4</sub> AND LaCoO<sub>3</sub>–Co<sub>3</sub>O<sub>4</sub>. I – Preparation, characterization and catalytic properties for the oxidation of CO  
Applied Catalysis B: Environmental 11 (1997) 167–179  
L. Simonot, F. Garin, G. Maire
- 62 A comparative study of LaCoO<sub>3</sub>, Co<sub>3</sub>O<sub>4</sub> and a mix of LaCoO<sub>3</sub>–Co<sub>3</sub>O<sub>4</sub>. II – Catalytic properties for the CO + NO reaction  
Applied Catalysis B 11 (1997) 181–191  
L. Simonot, F. Garin, G. Maire
- 63 Catalytic activity of bulk tungsten carbides for alkane reforming. II – Catalytic activity of tungsten carbides modified by oxygen  
Journal of Catalysis 166 (1997) 125–135  
V. Keller, P. Wehrer, F. Garin, R. Ducros, G. Maire
- 64 Catalytic activity of bulk tungsten carbides for alkane reforming. III – Reaction mechanisms and kinetic model  
Journal of Catalysis 166 (1997) 136–147  
F. Garin, V. Keller, R. Ducros, A. Muller, G. Maire
- 65 Influence of the surrounding atmosphere upon the catalytic performances of three-way catalysts  
Applied Catalysis A 149 (1997) 245–256  
V. Pitchon, F. Garin, G. Maire
- 66 Isomerization of 2-methylpentane and ring opening of methylcyclopentane over Pt–Co/NaY catalysts  
Applied Catalysis A 152 (1997) 237–247  
F. Garin, P. Girard, G. Maire, G. Lu, L. Guzzi
- 67 Permanent change of catalytic properties induced by microwave activation on 0.3% Pt/Al<sub>2</sub>O<sub>3</sub> (EURO-Pt-3) and on 0.3% Pt–0.3% Re/Al<sub>2</sub>O<sub>3</sub> (EURO-Pt-4)  
Applied Catalysis A 156 (1997) 167–180  
G. Roussy, S. Hilaire, J.M. Thiébaud, G. Maire, F. Garin, S. Ringler
- 68 2-methylpentane catalytic reactions on Pt (3 wt.%)–HNa? – Zeolite. Kinetic studies  
Journal de Chimie physique 95 (1998) 536–560  
S. Siffert, F. Garin
- 69 Kinetics of 2-methylpentane catalytic transformations over Pt/Naβ zeolite  
Applied Catalysis A 178 (1999) 85–95  
S. Siffert, D. Yu Murzin, F. Garin
- 70 Mechanistic studies of NO<sub>x</sub> reduction reactions under oxidative atmosphere on alumina-supported 1 wt% Pt and 1 wt% Pt–0.5 wt%Zn catalysts–Part I  
Applied Catalysis B 20 (1999) 205–218  
F. Garin, P. Girard, S. Ringler, G. Maire, N. Davies
- 71 Mechanistic studies of NO<sub>x</sub> reduction reactions under oxidative atmosphere on alumina-supported 0.2 wt% platinum catalyst treated under microwave–Part II  
Applied Catalysis B 20 (1999) 219–233  
S. Ringler, P. Girard, G. Maire, S. Hilaire, G. Roussy, F. Garin
- 72 Influence of acidity–basicity in <sup>13</sup>C-labeled hexane isomerization reactions on exchanged Pt–β zeolite. Mechanistic studies  
Journal of Catalysis 184 (1999) 19–28  
S. Siffert, J. Sommer, J.L. Schmitt, F. Garin
- 73 No reaction over nanometer scale platinum clusters deposited on gamma alumina: an XAS study

- Applied Catalysis A 189 (1999) 139–145  
S. Schneider, D. Bazin, F. Garin, G. Maire, M. Capelle, G. Meunier, R. Noirot
- 74 Study of isomerization of  $^{13}\text{C}$ -labelled hexanes on oxygen modified bulk tungsten carbides  
Phys. Chem. Chem. Phys. 2 (2000) 2893–2902  
V. Keller, F. Garin, G. Maire
- 75 Development of a cell for EXAFS in situ studies of automotive catalytic converters  
Journal of X-ray Science and Technology 8 (2000) 200–211  
S. Schneider, D. Bazin, G. Maire, F. Garin, J.M. Dubuisson, M. Ribbens, H. Sonnevile, G. Meunier, H. Dexpert
- 76 Development of a cell for EXAFS in situ studies of automotive catalytic converters  
Journal de Physique IV 10 Pr 10 (2000) 449–454  
S. Schneider, D. Bazin, G. Maire, F. Garin, J.M. Dubuisson, M. Ribbens, H. Sonnevile, G. Meunier, H. Dexpert
- 77 Catalytic behaviour of combined palladium–acid catalysts: use of Al and Zr-pillared montmorillonite as supports. Part I: reactivity of linear, branched and cyclic hexane hydrocarbons  
Applied Catalysis A 207 (2001) 323–332  
R. Issaadi, F. Garin, C.E. Chitour, G. Maire
- 78 An EXAFS study of the interaction of different reactant gases over nanometer scale Pt clusters deposited on  $\gamma\text{-Al}_2\text{O}_3$   
Catalysis Letters 71 (2001) 155–162  
S. Schneider, D. Bazin, G. Meunier, R. Noirot, M. Capelle, F. Garin, G. Maire
- 79 From bifunctional site to metal-proton adduct site in alkane reforming reactions on sulphated zirconia-supported Pt or Pd or Ir catalysts  
Catalysis Letters 76 (2001) 45–51  
U.B. Demirci, F. Garin
- 80 Substrate-modifier but not catalyst-modifier: heterogeneous hydrogenation of C=O and C=C using cinchonidine  
Tetrahedron Letters 42 (2001) 4741–4744  
A. Solladié-Cavallo, C. Marsol, F. Hoernel, F. Garin
- 81 Chromatographic resolution of anthryl and phenanthryl-ethylamines and their use as chiral modifier for catalytic heterogeneous hydrogenation of ethyl pyruvate Enantiomer, 6 (2001) 245  
A. Solladié-Cavallo, C. Marsol, C. Suteu, F. Garin
- 82 Mechanism of  $\text{NO}_x$  decomposition  
Applied Catalysis A 222 (2001) 183–219  
F. Garin
- 83  $\text{DeNO}_x$  reaction studies. Reactivity of carbonyl or nitro-compounds compared to  $\text{C}_3\text{H}_6$ : influence of adsorbed species in  $\text{N}_2$  and  $\text{N}_2\text{O}$  formation  
Applied Catalysis B 37 (2002) 49–62  
K. Oulad Haj, S. Ziyade, M. Ziyad, F. Garin
- 84 Proton/deuterium exchange in cinchonidine and deuteration of ethyl pyruvate using platinum/ $\text{Al}_2\text{O}_3$  catalysts  
Tetrahedron Letters 43 (2002) 2671–2673  
A. Solladié-Cavallo, F. Hoernel, M. Schmitt, F. Garin
- 85 Kinetic study of *n*-heptane conversion on sulfated zirconia-supported platinum catalyst: the metal-proton adduct is the active site  
Journal of Molecular Catalysis A 188 (2002) 233–243  
Ü.B. Demirci, F. Garin
- 86 New chiral modifiers in enantioselective heterogeneous catalytic hydrogenation of ethyl pyruvate over Pt/ $\text{Al}_2\text{O}_3$ : chiral amino alcohols derived from piperidine  
Tetrahedron Letters 43 (2002) 4733–4735  
A. Solladié-Cavallo, C. Marsol, F. Garin
- 87 Oxidation of unsymmetrical dimethylhydrazine over heterogeneous catalysts. Solution of environmental problems of production, storage and disposal of highly toxic rocket fuels  
Catalysis Today 75 (2002) 277–285  
Z.R. Ismagilov, M.A. Kerzhentsev, I.Z. Ismagilov, V.A. Sazonov, V.N. Parmon, G.L. Elizarova, O.P. Pestunova, V.A. Shandakov, Yu. L. Zuev, V.N. Eryomin, N.V. Pestereva, F. Garin, H.J. Veringa
- 88 Heterogeneous asymmetric hydrogenation and deuteration of 2-methyl-2-pentenoic acid over pd supported catalysts: proton/deuterium exchange  
Journal of Molecular Catalysis A 195 (2003) 181–188
- 89 A. Solladié-Cavallo, F. Hoernel, M. Schmitt, F. Garin Catalytic behaviour of acid catalysts supported palladium: use of Al and Zr-pillared montmorillonite as supports. Part II: Kinetic study  
Applied Catalysis A 243 (2003) 367–377  
R. Issaadi, F. Garin
- 90 Electronic conditions for carbon–carbon bond rearrangements on metallic surfaces  
Journal of Catalysis 214 (2003) 336–340
- 91 P. Légaré, F. Garin  
Photocatalytic oxidation of butyl acetate in vapor phase on  $\text{TiO}_2$ , Pt/ $\text{TiO}_2$  and  $\text{WO}_3/\text{TiO}_2$  catalysts  
Journal of Catalysis 215 (2003) 129–138  
V. Keller, P. Bernhardt, F. Garin
- 92  $\text{SO}_2$  sorption on fresh and aged  $\text{SO}_x$  traps  
Applied Catalysis B 42 (2003) 237–249  
L. Limousy, H. Mahzoul, J.F. Brillhac, P. Gilot, F. Garin, G. Maire
- 93 A study of the regeneration of fresh and aged  $\text{SO}_x$  adsorbers under reducing conditions  
Applied Catalysis B 45 (2003) 169–179  
L. Limousy, H. Mahzoul, J.F. Brillhac, F. Garin, G. Maire, P. Gilot
- 94 Photocatalytic behavior of a new composite ternary system:  $\text{WO}_3/\text{SiC-TiO}_2$ . Effect of the coupling of semiconductors and oxides in photocatalytic oxidation of methylethylketone in the gas phase

- Catalysis Communications 4 (2003) 377–383  
V. Keller and F. Garin
- 95 A new TiO<sub>2</sub>–βSiC material for use as photocatalyst  
Materials Letters 58 (2004) 970–974  
N. Keller, V. Keller, F. Garin, M.J. Ledoux
- 96 Preface as Guest Editor of the first French–Algerian  
Congress on Emerging materials  
Catalysis Today 89 (2004) 253–254  
F. Garin, J.C. Parlebas, C. Minot, M. Guemmas
- 97 Environmental catalysis  
Catalysis Today 89 (2004) 255–268  
F. Garin
- 98 Ethylcyclopentane reactions on alumina-supported  
low loaded platinum–copper catalysts  
Catalysis Today 89 (2004) 379–385  
M. Boutahala, B. Djellouli, N. Zouaoui, F. Garin
- 99 A high performance Pt/β-SiC catalyst for catalytic  
combustion of model carbon particles  
Applied Catalysis A: General 266 (2004) 21–27  
L. Pesant, J. Matta, C. Pham-Huu, F. Garin, M.J. Ledoux,  
P. Bernhardt, C. Pham
- 100 Synthesis and characterization of a new medium  
surface area TiO<sub>2</sub>–β-SiC material for use as photocatalyst  
Journal of Materials Chemistry 14 (2004) 1887–1895  
N. Keller, V. Keller, E. Barraud, F. Garin, M.J. Ledoux
- 101 Catalytic reactions of methylcyclohexane (MCH) on  
partially reduced MoO<sub>3</sub>  
Applied Catalysis A: General 275 (2004) 141–147  
H. Belatel, H. Al-Kandari, F. Al-Khorafi, A. Katrib, F. Garin
- 102 Direct quantitative determination of surface  
bronsted acidity of solids by H/D exchange using D<sub>2</sub>O  
Chemical Communications (2005) 201–203  
N. Keller, G. Koehl, F. Garin, V. Keller
- 103 Catalyse : l'alchimie verte  
Le Journal du CNRS, N°184 mai 2005  
F. Garin, C. Pham-Huu, V. Keller-Spitzer
- 104 A tool for direct quantitative measurement of surface  
bronsted acid sites of solids by H/D exchange using D<sub>2</sub>O  
Applied Catalysis A 289 (2005) 37–43  
G. Koehl, N. Keller, F. Garin, V. Keller
- 105 Heterogeneous hydrogenation of 1-naphtol and 2-  
naphtol over Ru/Al<sub>2</sub>O<sub>3</sub>: a simple 1 h NMR method for  
determination of the diastereoselectivity  
Comptes rendus Chimie 8 (2005) 1975–1980  
A. Solladié-Cavallo, B. Ahmed, M. Schmitt, F. Garin
- 106 Production of hydrogen by steam reforming of  
methanol over copper-based catalysts: the effect of cesium  
doping  
Applied Catalysis A 306 (2006) 22–28  
A. Houteit, H. Mahzoul, P. Ehrburger, P. Bernhardt,  
P. Légaré, F. Garin
- 107 Study of the acid character of some palladium-  
modified pillared clay catalysts: use of isopropanol  
decomposition as test reaction  
Catalysis Today 113 (2006) 166–173R. Issaadi, F. Garin,  
C.-E. Chitour
- 108 Preface as Guest Editor of the Conference Catalysis,  
Nanomaterials and Environment  
Catalysis Today 113 (2006) 131–132  
F. Garin, M. Maamache, G. Schmerber, C. Demangeat
- 109 Site requirements in the kinetics of alkane  
transformations catalysed by metals  
Topics in Catalysis 39 (2006) 11–27  
F. Garin
- 110 Palladium sulfated zirconium pillared montmor-  
illonite: catalytic evaluation in light naphta hydroisome-  
rization reaction  
Catalysis Today 113 (2006) 174–177  
R. Issaadi, F. Garin, C.-E. Chitour
- 111 A skeletal rearrangement study of a carbon-13  
labelled 3-methylpentane on doped sulfated zirconia  
catalysts  
Journal of Molecular Catalysis A 258 (2006) 46–58  
U.B. Demirci and F. Garin
- 112 Heterogeneous hydrogenation of substituted phe-  
nols over supported ruthenium: <sup>1</sup>H NMR study of the  
diastereoselectivity  
Journal of Molecular Catalysis A 273 (2007) 92–98  
A. Solladié-Cavallo, A. Baram, E. Choucair, H. Norouzi-  
Arasi, Schmitt, F. Garin
- 113 Catalytic reactions of methylcyclohexane (MCH) on  
partially reduced tungsten oxide(s)  
Applied Catalysis A 318 (2007) 227–233  
H. Belatel, H. Al-Kandari, F. Al-Kharafi, A. Katrib, F. Garin
- 114 Examination of gold as a metal promotor of sulfated  
zirconia in *n*-heptane isomerization at low temperature  
Turkish Journal of Chemistry 31 (2007) 105–111  
U.B. Demirci and F. Garin
- 115 Isomerization of 3-methyl (3-<sup>13</sup>C) pentane over  
platinum supported sulfated zirconias: reaction mechan-  
isms  
Catalysis Letters 114 (2007) 41–48  
U.B. Demirci and F. Garin
- 116 Kinetic study of *n*-heptane conversion on palla-  
dium or iridium supported on sulfated zirconia  
Journal of Molecular Catalysis A 271 (2007) 216–220  
U.B. Demirci and F. Garin
- 117 Kinetics of Ru-promoted sulphated zirconia cata-  
lysed hydrogen generation by hydrolysis of sodium  
tetrahydroborate  
Journal of Molecular Catalysis A 279 (2008) 57–62  
U.B. Demirci and F. Garin
- 118 Hydrocarbon catalytic reactivity of supported  
nanometallic particles  
In: “Nanoparticles and Catalysis”, Edited by Didier  
Astruc, Wiley-VCH, Chapter 17, 2008, pp. 529–551  
F. Garin and P. Légaré
- 119 La naissance de la chimie des surfaces

- Dans la Recherche 415 (2008) 58–59  
F. Garin, P. Légaré, S. Zafeiratou
- 120 Preface as Guest Editor of the Conference Paul Sabatier: catalysis contributions to key societal challenges  
Catalysis Today 138 (2008) 1  
F. Garin, P. Légaré, B. Louis
- 121 Promoted sulphated zirconia catalysed hydrolysis of sodium tetrahydroborate  
Catalysis Communications 9 (2008) 1167–1172  
U.B. Demirci and F. Garin
- 122 Effect of sintering on the catalytic activity of a Pt-based catalysts for Co oxidation: experiments and modeling  
Applied Catalysis B 83 (2008) 229–239  
J. Yang, V. Tschamber, D. Habermacher, F. Garin, P. Gilot
- 123 Ru-based bimetallic alloys for hydrogen generation by hydrolysis of sodium tetrahydroborate  
Journal of Alloys and Compounds 463 (2008) 107–111  
U.B. Demirci and F. Garin
- 124 Metal oxides nanoparticles on SBA-15: efficient catalysts for methane combustion  
Catalysis Today 138 (2008) 38–42  
G. Laugel, J. Arichi, M. Moliere, A. Kiennemann, F. Garin, B. Louis
- 125 Co<sub>3</sub>O<sub>4</sub> and Mn<sub>3</sub>O<sub>4</sub> nanoparticles dispersed on SBA-15: efficient catalysts for methane combustion  
Catalysis Letters 125 (2008) 14–21  
G. Laugel, J. Arichi, H. Guerba, M. Moliere, A. Kiennemann, F. Garin, B. Louis
- 126 Pt catalysed hydrogen generation by hydrolysis of sodium tetrahydroborate  
International Journal Green Energy 5 (2008) 148–156  
U.B. Demirci and F. Garin
- 127 Ring opening of methylcyclopentane on MoO<sub>3</sub> and WO<sub>3</sub> catalysts  
Scientific Study and Research 9 (2008) 1–12  
A. Djeddi, Y. Liu, I. Fechete, F. Garin
- 128 Preparation and characterisation of metal oxides supported on SBA-15 as methane combustion catalysts  
Comptes rendus Chimie 12 (2009) 731–739  
G. Laugel, J. Arichi, P. Bernhardt, M. Moliere, A. Kiennemann, F. Garin, B. Louis
- 129 Isomerization of *n*-butane on Pt(100): monomolecular mechanism investigation  
Surface Science 604 (2010) 1040–1043  
D. Randrianasoloharisoa, T. Dintzer, A. Rakotomahevitra, F.L. Razafindramisa, C. Demangeat, P. Légaré, F. Garin, J.C. Parlebas
- 130 Effect of sulphate groups on catalytic properties of chromium supported by zirconia in the *n*-hexane aromatization  
Journal of Sol–Gel Science and Technology 53 (2010) 412–417  
S. Raissi, M.K. Younes, A. Ghorbel, F. Garin
- 131 Single crystals of mesoporous tungstenosilicate W-MCM-48 molecular sieves for the conversion of methylcyclopentane (MCP)  
Applied Surface Science 257 (2011) 2791–2800  
I. Fechete, B. Donnio, O. Ersen, T. Dintzer, A. Djeddi, F. Garin
- 132 Treatment of 2,4,5-trichlorophenol by MgAl-SDBS organo layered double hydroxides: kinetic and equilibrium studies  
Chemical Engineering Journal 173 (2011) 36–41  
H. Zaghouane-boudiaf, M. Boutahala, C. Tiar, L. Arab, F. Garin
- 133 Preface “Catalytic materials for energy: past, present and future”. 6th European Conference “Paul Sabatier” on Catalysis  
Catalysis Today 189 (2012) 1  
I. Fechete, F. Garin, D. Begin
- 134 Selective ring opening of methylcyclopentane over Pt/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub>, Ir/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub>, Pt–Ir/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub> catalysts with hydrogen at atmospheric pressure  
Applied Catalysis A 413–414 (2012) 340–349  
A.Djeddi, I. Fechete, F. Garin
- 135 Conversion of methylcyclopentane (MCP) on Ir/MoO<sub>2</sub> and Pt–Ir/MoO<sub>2</sub> catalysts  
Catalysis Communications 17 (2012) 173–178  
A. Djeddi, I. Fechete, F. Garin
- 136 MnMCM-48, CoMCM-48 and CoMnMCM-48 mesoporous catalysts for the conversion of methylcyclopentane (MCP)  
Environmental Engineering and Management Journal 11 (2012) 1931–1943  
I. Fechete, S. Debbih-Boustila, O. Hulea, L. Lazar, D. Lutic, I. Balasabian, F. Garin
- 137 Fe-TUD-1 for the preferential rupture of the substituted C–C bond of methylcyclopentane (MCP)  
Catalysis Communications 17 (2012) 141–147  
S. Haddoum, I. Fechete, B. Donnio, F. Garin, D. Lutic, C.-E. Chitour
- 138 Selective ring opening of methylcyclopentane over titania-supported monometallic (Pt, Ir) AND Bimetallic (Pt–Ir) catalysts  
Topics in Catalysis 55 (2012) 700–709  
A. Djeddi, I. Fechete, F. Garin
- 139 Effect of carbon black combustion on NO<sub>x</sub> trap catalyst performances  
Catalysis Today 189 (2012) 60–64  
J. Klein, I. Fechete, V. Tschamber, F. Garin
- 140 Mo/KIT-6, Fe/KIT-6 and Mo–Fe/KIT-6 As new types of heterogeneous catalysts for the conversion of MCP  
Microporous and Mesoporous Materials, 155 (2012) 131–142  
A. Boulaoued, I. Fechete, B. Donnio, M. Bernard, P. Turek, F. Garin
- 141 Adsorption of NO on Pt (100) from first principles  
Physica Scripta 87 (2013) 055601

P.S. Moussounda, M. Ndollo, T. Dintzer, J.-C. Mayela Nkouka, F. Garin

142 Density functional theory (DFT) investigation of the adsorption of the CH<sub>3</sub>OH/Au (100) system

Surface and Interface Analysis 45 (2013) 1410–1418

M. N'Dollo, P.S. Moussounda, T. Dintzer, B. M'Passi-Mabiala, F. Garin

143 Catalytic behavior of MnMCM-48 and WMnMCM-48 ordered mesoporous catalysts in a reductive environment: a study of the conversion of methylcyclopentane

Catalysis Science and Technology 3 (2013) 444–453

I. Fechete, O. Ersen, F. Garin, L. Lazar, A. Rach

144 Polyacrylamide-based sorbents for the removal of hazardous metals

Adsorption Science and Technology, 31 (2013) 691–709

S. Moulay, N. Bensacia, F. Garin, I. Fechete, A. Boos

145 Electron-deficient adduct site in the ring opening of methylcyclopentane on tungsten-dioxide supported Pt, Ir and Pt–Ir catalysts

Comptes rendus Chimie 16 (2013) 433–441

A.Djeddi, I. Fechete, O. Ersen, F. Garin

146 Carbon – NSR catalyst interaction: impact on catalyst structure and NO<sub>x</sub> storage efficiency

Applied Catalysis B 132–133 (2013) 527–534

J. Klein, D. Wu, V. Tschamber, I. Fechete, F. Garin

147 Reactivity and catalysis by nanoalloys

Book « From Fundamentals to Emergent Applications, Florent Calvo Editor, Elsevier, C 9, 2013, pp. 283–344

D. Bazin, I. Fechete, F. Garin, G. Barcaro, F.R. Negreiros, L. Sementa, A. Fortunelli

148 Combined fixed-bed reactor and in situ drifts tests of no adsorption on a NO<sub>x</sub> storage-reduction system catalysts

Chemical Engineering and Technology, 37 (2014) 204–212

D. Wu, V. Tschamber, L. Limousy, L. Michelin, A. Westermann, B. Azambre, I. Fechete, F. Garin

149 Removal of cadmium (II) from aqueous media using COOH/TUD-1 mesoporous solid. Kinetic and thermodynamic studies

Environmental Engineering and Management Journal, 2014

N. Bensacia, I. Fechete, S. Moulay, S. Debbih-Boustila, A. Boos, F. Garin

150 Kinetic and equilibrium studies of lead(II) adsorption from aqueous media by kit-6 mesoporous silica functionalized with –COOH

Comptes rendus Chimie, 2014, this issue

N. Bensacia, I. Fechete, S. Moulay, O. Hulea, A. Boos, F. Garin

151 Synthesis of polyacrylamide-bound hydroquinone via a homolytic pathway: application for removal of heavy metals

Comptes rendus Chimie, 2014, this issue

S. Moulay, N. Bensacia, F. Garin, I. Fechete, A. Boos

152 Simultaneous effect of carbon and water on NO<sub>x</sub> adsorption on a stabilized Pt-Ba/Al<sub>2</sub>O<sub>3</sub>

Comptes rendus Chimie, 2014, this issue

D. Wu, V. Tschamber, L. Limousy, A. Westermann, B. Azambre, I. Fechete, F. Garin

Ioana Fechete

*Institut de chimie et procédés pour l'énergie, l'environnement et la santé–ICPEES, UMR 7515 CNRS, Université de Strasbourg,*

*25, rue Becquerel, 67087 Strasbourg cedex 2, France*

*E-mail address: ifechete@unistra.fr*