



GEMaC

Groupe d'Étude de la Matière Condensée

DIAM – PUBLICATIONS 2010-2014

2014

J. Barjon, F. Jomard, S. Morata

"Arsenic-bound excitons in diamond",

Physical Review B 89 (2014) 045201

W. Janssen, S. Turner, G. Sakr, F. Jomard, J. Barjon, G. Degutis, YG Lu, J. D'Haen, A. Hardy, M. Van Bael, J. Verbeeck, G. Van Tendeloo, K. Haenen

"Substitutional phosphorus incorporation in nanocrystalline CVD diamond thin films",

Physica Status Solidi – Rapid Research Letters 8 (2014) 705

A. Pierret, J. Loayza, B. Berini, A. Betz, B. Plaçais, F. Ducastelle, J. Barjon, A. Loiseau

"Excitonic recombinations in hBN: from bulk to exfoliated layers",

A. Tallaire, J. Achard, A. Boussadi, O. Brinza, A. Gicquel, I.N. Kupriyanov, Y.N. Palyanov, G. Sakr, J. Barjon

"High quality thick CVD diamond films homoepitaxially grown on (111)-oriented substrates",

Diamond and Related Materials 41 (2014) 34

2013

P. Scajev, V. Gudelis, A.Tallaire, J. Barjon, K. Jarasiunas

"Injection and temperature dependent carrier recombination rate and diffusion length in freestanding CVD diamond",

Physica Status Solidi A 210 (2013) 2016

I. Stenger, M.-A. Pinault-Thaury, T. Kociniewski, A. Lusson, E. Chikoidze, F. Jomard, Y. Dumont, J. Chevallier and J. Barjon

"Impurity-to-band activation energy in phosphorus-doped diamond",

Journal of Applied Physics 114 (2013) 73711

G. Rousseau, H. Fensterbank, K. Baczko, M. Cano, I. Stenger, C. Larpent, E. Allard
"Synthesis of Clickable Water-Soluble Poly(amidoamine) Fullerodendrimers and Their Use for Surface Functionalization of Azido-Coated Polymer Nanoparticles",
ChemPlusChem 78 (2013) 352

J. Mimila-Arroyo, F. Jomard, J. Chevallier

"Improvement of AlGa_N/Ga_N/Si high electron mobility heterostructure performance by hydrogenation",

Applied Physics Letters 100 (2013) 192109

D. G.F. David, M.-A. Pinault-Thaury, D. Ballutaud, C. Godet

"Sensitivity of photoelectron energy loss spectroscopy to surface reconstruction of microcrystalline diamond films",

Applied Surface Science 273 (2013) 607

2012

M.A. Pinault-Thaury, B. Berini, I. Stenger, E. Chikoidze, A. Lusson, F. Jomard, J. Chevallier, J. Barjon

"High fraction of substitutional phosphorus in a (100) diamond epilayer with low surface roughness"

Applied Physics Letters 100 (2012) 192109

R. Issaoui, J. Achard, A. Tallaire, F. Silva, A. Gicquel, R. Bisaro, B. Servet, G. Garry, J. Barjon

"Evaluation of freestanding boron-doped diamond grown by chemical vapour deposition as substrates for vertical power electronic devices",

Applied Physics Letters 100 (2012) 122109

J. Barjon, E. Chikoidze, F. Jomard, Y. Dumont, M.-A. Pinault-Thaury, R. Issaoui, O. Brinza, J. Achard, F. Silva

"Homoepitaxial boron-doped diamond with a very low compensation",

Physica Status Solidi A 209 (2012) 1651

J. Achard, R. Issaoui, A. Tallaire, F. Silva, J. Barjon, A. Gicquel

"Freestanding CVD boron doped diamond single crystals: a substrate for vertical power electronic devices?",

Physica Status Solidi A 209 (2012) 1750

A. Chavanne, J. Barjon, B. Vilquin, J. Arabski, J.C. Arnault

"Surface investigations on different nucleation pathways for diamond heteroepitaxial growth on iridium",

Diamond and Related Materials 22 (2012) 52

B. BenMoussa, J. D'Haen, C. Borschel, J. Barjon, A. Soltani, V. Mortet, C. Ronning, M. D'Olieslaeger, H.G. Boyen, K. Haenen

"Hexagonal boron nitride nanowalls: physical vapour deposition, 2D/3D morphology and spectroscopic analysis",

Journal of Physics D-applied Physics 45 (2012) 135302

J. Barjon, F. Jomard, A. Tallaire, J. Achard, F. Silva

"Determination of exciton diffusion lengths in isotopically engineered diamond junctions",

Applied Physics Letters 100 (2012) 122107

B. Willems, A. Tallaire, J. Barjon

"Exploring the Origin and Nature of Luminescent Regions In Cvd Synthetic Diamond",

Gems & Gemology 47 (2011) 202

A. Tallaire, J. Barjon, O. Brinza, J. Achard, F. Silva, V. Mille, R. Issaoui, A. Tardieu, A. Gicquel

"Dislocations and impurities introduced from etch-pits at the epitaxial growth resumption of diamond",

Diamond and Related Materials 20 (2011) 875

M.A. Pinault-Thaury, T. Tillocher, D. Kobor, N. Habka, F. Jomard, J. Chevallier, J. Barjon

"Phosphorus donor incorporation in (100) homoepitaxial diamond: Role of the lateral growth",

Journal of Crystal Growth 335 (2011) 31

M.A. Pinault-Thaury, T. Tillocher, N. Habka, D. Kobor, F. Jomard, J. Chevallier, J. Barjon

"n-Type CVD diamond: Epitaxy and doping",

Materials Science and Engineering B-advanced Functional Solid-state Materials 176 (2011) 1401

L. Museur, G. Brasse, A. Pierret, S. Maine, B. Attal-Tretout, F. Ducastelle, A. Loiseau, J. Barjon, K. Watanabe, T. Taniguchi, A. Kanaev

"Exciton optical transitions in a hexagonal boron nitride single crystal",

Physica Status Solidi-rapid Research Letters 5 (2011) 214

A. Kumar, J. Pernot, F. Omnes, P. Muret, A. Traore, L. Magaud, A. Deneuville, N. Habka, J. Barjon, F. Jomard, M.A. Pinault, J. Chevallier, C. Mer-Calfati, J.C. Arnault, P. Bergonzo

"Boron-deuterium complexes in diamond: How inhomogeneity leads to incorrect carrier type identification"

Journal of Applied Physics 110 (2011) 033718

H. Kato, J. Barjon, N. Habka, T. Matsumoto, D. Takeuchi, H. Okushi, S. Yamasaki

"Energy level of compensator states in (001) phosphorus-doped diamond",

Diamond and Related Materials 20 (2011) 1016

A. Chavanne, J.C. Arnault, J. Barjon, J. Arabski

"Bias-enhanced nucleation of diamond on iridium: A comprehensive study of the first stages by sequential surface analysis"

Surface Science 605 (2011) 564

J. Barjon, T. Tillocher, N. Habka, O. Brinza, J. Achard, R. Issaoui, F. Silva, C. Mer, P. Bergonzo

"Boron acceptor concentration in diamond from excitonic recombination intensities"

Physical Review B 83 (2011) 073201

J. Barjon, N. Habka, J. Chevallier, F. Jomard, E. Chikoidze, C. Mer-Calfati, J.C. Arnault, P. Bergonzo, A. Kumar, J. Pernot, F. Omnes

"Hydrogen-induced passivation of boron acceptors in monocrystalline and polycrystalline diamond"

Physical Chemistry Chemical Physics 13 (2011) 11511

J. Achard, F. Silva, R. Issaoui, O. Brinza, A. Tallaire, H. Schneider, K. Isoird, H. Ding, S. Kone, M.A. Pinault, F. Jomard, A. Gicquel

"Thick boron doped diamond single crystals for high power electronics"

Diamond and Related Materials 20 (2011) 145

2010

M. Lions, S. Saada, B. Bazin, M.A. Pinault, F. Jomard, F. Andrieu, O. Faynot, P. Bergonzo

"Extreme insulating ultrathin diamond films for SOD applications: From coalescence modelling to synthesis"

Diamond and Related Materials 19 (2010) 413

R. Issaoui, J. Achard, F. Silva, A. Tallaire, A. Tardieu, A. Gicquel, M.A. Pinault, F. Jomard

"Growth of thick heavily boron-doped diamond single crystals: Effect of microwave power density"

Applied Physics Letters 97 (2010) 182101

N. Habka, E. Chikoidze, F. Jomard, Y. Dumont, J. Chevallier, J. Barjon, C. Mer, P.

Bergonzo

"Deuterium-induced passivation of boron acceptors in polycrystalline diamond"

Journal of Applied Physics 108 (2010) 123701

N. Habka, J. Chevallier, J. Barjon

"Electron-beam-induced dissociation of (B,D) complexes in diamond mediated by multiple vibrational excitations"

Physical Review B 81 (2010) 045207

N. Habka, J. Barjon, A. Lazea, K. Haenen

"Stress in (110)-textured phosphorus-doped polycrystalline diamond studied by Raman and cathodoluminescence spectroscopies"

Journal of Applied Physics 107 (2010) 103531

G. Frangieh, M.A. Pinault, J. Barjon, T. Tillocher, F. Jomard, J. Chevallier

"Phosphorus incorporation and activity in (100)-oriented homoepitaxial diamond layers"

Physica Status Solidi A 207 (2010) 2003

J.C. Arnault, S. Saada, C. Mer-Calfati, F. Jomard, N. Habka, J. Barjon, J. Chevallier

"Enhanced deuterium diffusion in boron doped monocrystalline diamond films using bias-assisted MPCVD"

Physics Letters A 374 (2010) 3254

» Publications 2015-2020

» Publications 2006-2009