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The dynamics of plasma-surface interaction

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List of publications

This thesis is based on the following publications

Chapter 2

F. Gou, M. A. Gleeson, J. Villette, and A. W. Kleyn,
A new time-of-flight instrument capable of in situ and real-time studies of plasma-treated surfaces
Vacuum, 81, 2006, P196-201

Chapter 3

F. Gou, M. A. Gleeson, J. Villette, and A. W. Kleyn,
3 keV Ar scattering from unreconstructed Si(100) at grazing incidence: Molecular dynamics simulation
Nuclear Instruments and Methods in Physics Research B, 247, 2006, P244-253

Chapter 4

F. Gou, M. A. Gleeson, A. W. Kleyn,
MD simulation of Ar scattering from defected Si (100) at grazing incidence
Accepted by *NIMB*

Chapter 5

F. Gou, M. A. Gleeson, A. W. Kleyn,
Theoretical modeling of energy redistribution and stereodynamics in CF scattering from Si (100) under grazing incidence
Physical Chemistry Chemical Physics, 8, 2006, P5522 – 5534.

Chapter 6

F. Gou, M.A. Gleeson and A.W. Kleyn,
CF interaction with Si (100)-(2×1): Molecular dynamics simulation
Surface Science, 601 (2007) P76--86

Chapter 7

F. Gou, M. A. Gleeson, A. W. Kleyn,
Molecular dynamics simulation of CH₃ interaction with Si (100) surface
Accepted by *Surface Science*

Chapter 8

Part of the contents of this chapter will be published as
F. Gou, M. A. Gleeson, A. W. Kleyn,
Effects of Temperature on CF₃ interacting Si (100)-(2x1): Molecular Dynamics
Simulation. In preparation

In addition, the following papers are not included as a part of the thesis

F. Gou , M. A. Gleeson , J. Villette , S. E. F. Kleyn and A. W. Kleyn
The surface of 1-euro coins studied by X-ray photoelectron spectroscopy
Applied Surface Science, 225, 2004, P 47-53

F. Gou, M. A. Gleeson, A. W. Kleyn,
CF₃ interaction with Si (100)-(2x1): Molecular Dynamics Simulation.
Accepted by *surface Science*

F. Gou, M. A. Gleeson, A. W. Kleyn,
CF₃ interaction with fluorinated silicon surface: Molecular Dynamics Simulation.
In preparation

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Curriculum Vitae

Fujun Gou was born in 1969 in Chengdu, China. In 1989, he was admitted to the Department of material science and technology of Lanzhou University and got his bachelor degree. In 1993, he joined Sichuan University as a master student for ions interacting with materials. During his study, he investigated the properties of composite MoS₂ thin films fabricated by the ion-beam-assisted-deposition (IBAD) method. After obtaining his master degree, he joined the Department of material science and technology in University of Electron Science and Technology. A project was started on the fabrication and characterization of a microwave phase shifter device. This device is very interesting for application in telecommunication. In 2001, he joined the surface science research group at Leiden University in the group led by Prof. Dr. Aart. W. Kley. During this time, time was spent on fabricating a new time of flight instrumentation for characterizing in-situ and real-time plasma-surface interactions. He also performed molecular dynamics simulations of low energy ion scattering and the dynamics of plasma-surface interactions.