

Content

Summary 2

Souhrn 3

Klíčová slova 4

Keywords..... 4

1. Introduction 7

2. Diamond Thin Films..... 7

 2.1. Diamond Properties 7

 2.2. Diamond Synthesis 8

3. Hydrogen and Oxygen Terminated Diamond Surface..... 9

 3.1. Hydrogen Termination 10

 3.2. Oxygen Termination..... 10

4. Diamond as Functional Coating for (bio-) Sensors 11

 4.1. Optical Elements for Infrared Spectroscopy..... 12

 4.2. Field Effect Transistors - FETs 13

 4.3. Gas Sensor 16

 4.4. Electrical Monitoring of Cell Growth..... 18

5. Conclusions 20

6. References 21

Ing. Alexander Kromka, Ph.D. - Curriculum vitae..... 24