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METAL SUBSTRATES -- POSSIBLE REASON OF THE COMPETITION OF THE RAMAN BANDS (INFLUENCE OF THE COMPLEX DIELECTRIC CONSTANT) -- SINGLE MOLECULE DETECTION BY THE SERS METHOD AND ITS RELATION TO THE QUADRUPOLES THEORY -- CHARGE TRANSFER ENHANCEMENT MECHANISM -- EXPLANATION OF EXPERIMENTAL PHENOMENA ACCOMPANYING SERS -- CONCLUSION -- APPENDIX 1: WAVE FUNCTIONS OF ARBITRARY MOLECULES -- APPENDIX 2:THE TABLES OF IRREDUCIBLE REPRESENTATIONS OF SOME POINT GROUPS -- REFERENCES -- INDEX.

Sommario/riassunto

This book is devoted to explanation of SERS in terms of the strong dipole and especially quadruple light-molecule interactions arising in surface fields strongly varying in space in the region of strongly irregular surface roughness.