

# Non-Linear Compact Proton Synchrotrons to Improve Human Cancer Cells and Tissues Treatments and Diagnostics through Particle Therapy Accelerators with Monochromatic Microbeams

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## Short Communication

The most challenging issues facing global society are non-linear compact proton synchrotrons to improve human cancer cells and tissues treatments and diagnostics through particle therapy accelerators with monochromatic microbeams<sup>[1-74]</sup>. The advancement of nanoscience, nanomedicine and nanotechnology is expected to play an important role for the synchrotron radiation therapy of human cancer cells and tissues<sup>[1-74]</sup>. Recent efforts have been made in the design of novel anti-cancer Nano drugs for addressing oncology issues. A variety of anti-cancer Nano drugs have been employed in many catalytic processes. However, the clinical, biological, medical, medicinal, pharmaceutical and biochemical applications of anti-cancer Nano drugs in non-linear compact proton synchrotrons to improve human cancer cells and tissues treatments and diagnostics through particle therapy accelerators with monochromatic microbeams is not viable due to the availability and cost of producing them. Therefore, development of simple and economical methodologies for the design of catalytic anti-cancer Nano drugs is much awaited. Nano-architecture is considered to be an efficient route for the design of novel anti-cancer Nano drugs, which provides high efficiency, longer durability and reusability.

As a typical kind of human cancer cells and tissues, lung cancer has been the subject of interest because of its unique properties, including anti-cancer Nano drugs storage capacity and anti-cancer Nano drugs conductivity. Anti-cancer Nano drugs has been widely used in several catalytic formulations, in non-linear compact proton synchrotrons to improve human

cancer cells and tissues treatments and diagnostics through particle therapy accelerators with monochromatic microbeams, as sensor, in UV shielding and luminescence. Anti-cancer Nano drugs has also been used as important abrasive nanomaterials for clinical-biological-medical-medicinal-pharmaceutical-biochemical of advanced integrated circuits and as Cadmium Oxide (CdO) nanoparticles sorbent for the removal of human cancer cells from human cancer tissues. For nanometer-sized anti-cancer drugs, the corresponding size-induced property changes, such as catalytic activity, blue shift of absorption spectra, lattice expansion and phase transformation, are obvious and cannot be ignored. For example, hierarchically mesostructured anti-cancer Nano drugs exhibits a photovoltaic response, while normal lung cancer does not show this response. Similarly, defect site enriched nano-structured lung cancer requires low activation energy for ethylbenzene dehydrogenation compared to conventional anti-cancer Nano drugs in non-linear compact proton synchrotrons to improve human cancer cells and tissues treatments and diagnostics through particle therapy accelerators with monochromatic microbeams.

Therefore, the design of functional anti-cancer Nano drugs with certain size, shape and surface structures by simple routes will be highly appreciated in environmentally benign processes. In the past few years, well-defined anti-cancer Nano drugs in various morphologies such as nanoparticles, nanorods, nanowires, nanotubes and nanopolyhedrons have been

successfully fabricated by a variety of methods. Recently, we have developed a simple route for the synthesis of defect site enriched nano-crystalline anti-cancer Nano drugs for the effective utilization of Cadmium Oxide (CdO) nanoparticles. Alireza Heidari and his co-workers at BioSpectroscopy Core Research Laboratory, Faculty of Chemistry, California South University (CSU), Irvine, California, USA, prepared monodispersed flowerlike Cadmium Oxide (CdO) nanoparticles microspheres for human cancer stem cells reforming by non-linear compact proton synchrotrons to improve human cancer cells and tissues treatments and diagnostics through particle therapy accelerators with monochromatic microbeams<sup>[1-74]</sup>. This short communication will highlight some of the novel approaches in the design of functional anti-cancer Nano drugs by nano-architecture and their implication in non-linear compact proton synchrotrons to improve human cancer cells and tissues treatments and diagnostics through particle therapy accelerators with monochromatic microbeams<sup>[1-74]</sup>.

## Reference

1. Heidari, A., Brown, C. Study of Composition and Morphology of Cadmium Oxide (CdO) Nanoparticles for Eliminating Cancer Cells. (2015) *Journal of Nanomedicine Research* 2(5): 20.  
[Pubmed](#) | [Crossref](#) | [Others](#)
2. Heidari, A., Brown, C. Study of Surface Morphological, Phytochemical and Structural Characteristics of Rhodium (III) Oxide (Rh<sub>2</sub>O<sub>3</sub>) Nanoparticles. (2015) *International Journal of Pharmacology, Phytochemistry and Ethnomedicine* 1: 15-19.  
[Pubmed](#) | [Crossref](#) | [Others](#)
3. Heidari, A. An Experimental Biospectroscopic Study on Seminal Plasma in Determination of Semen Quality for Evaluation of Male Infertility. (2016) *Int J Adv Technol* 7: e007.  
[Pubmed](#) | [Crossref](#) | [Others](#)
4. Heidari, A. Extraction and Preconcentration of N-Tolyl-Sulfonyl-Phosphoramid-Saeure-Dichlorid as an Anti-Cancer Drug from Plants: A Pharmacognosy Study. (2016) *J Pharmacogn Nat Prod* 2: e103.  
[Pubmed](#) | [Crossref](#) | [Others](#)
5. Heidari, A. A Thermodynamic Study on Hydration and Dehydration of DNA and RNA-Amphiphile Complexes. (2016) *J Bioeng Biomed Sci* 5: 006.  
[Pubmed](#) | [Crossref](#) | [Others](#)
6. Heidari, A. Computational Studies on Molecular Structures and Carbonyl and Ketene Group's Effects of Singlet and Triplet Energies of Azidoketene O=C=CH-NNN and Isocyanatoketene O=C=CH-N=C=O. (2016) *J Appl Computat Math* 5: e142.  
[Pubmed](#) | [Crossref](#) | [Others](#)
7. Heidari, A. Study of Irradiations to Enhance the Induces the Dissociation of Hydrogen Bonds between Peptide Chains and Transition from Helix Structure to Random Coil Structure Using ATR-FTIR, Raman and <sup>1</sup>HNMR Spectroscopies. (2016) *J Biomol Res Ther* 5: e146.  
[Pubmed](#) | [Crossref](#) | [Others](#)
8. Heidari, A. Future Prospects of Point Fluorescence Spectroscopy, Fluorescence Imaging and Fluorescence Endoscopy in Photodynamic Therapy (PDT) for Cancer Cells. (2016) *J Bioanal Biomed* 8: e135.  
[Pubmed](#) | [Crossref](#) | [Others](#)
9. Heidari, A. Bio-Spectroscopic Study of DNA Density and Color Role as Determining Factor for Absorbed. Irradiation in Cancer Cells. (2016) *Adv Cancer Prev* 1: e102.  
[Pubmed](#) | [Crossref](#) | [Others](#)
10. Heidari, A. Manufacturing Process of Solar Cells Using Cadmium Oxide (CdO) and Rhodium (III) Oxide (Rh<sub>2</sub>O<sub>3</sub>) Nanoparticles. (2016) *J Biotechnol Biomater* 6: e125.  
[Pubmed](#) | [Crossref](#) | [Others](#)
11. Heidari, A. A Novel Experimental and Computational Approach to Photobiosimulation of Telomeric DNA/RNA: A Biospectroscopic and Photobiological Study. (2016) *J Res Development* 4: 144.  
[Pubmed](#) | [Crossref](#) | [Others](#)
12. Heidari, A. Biochemical and Pharmacodynamical Study of Microporous Molecularly Imprinted Polymer Selective for Vancomycin, Teicoplanin, Oritavancin, Telavancin and Dalbavancin Binding. (2016) *Biochem Physiol* 5: e146.  
[Pubmed](#) | [Crossref](#) | [Others](#)
13. Heidari, A. Anti-Cancer Effect of UV Irradiation at Presence of Cadmium Oxide (CdO) Nanoparticles on DNA of Cancer Cells: A Photodynamic Therapy Study. (2016) *Arch Cancer Res* 4: 1.  
[Pubmed](#) | [Crossref](#) | [Others](#)
14. Heidari, A. Biospectroscopic Study on Multi-Component Reactions (MCRs) in Two A-Type and B-Type Conformations of Nucleic Acids to Determine Ligand Binding Modes, Binding Constant and Stability of Nucleic Acids in Cadmium Oxide (CdO) Nanoparticles-Nucleic Acids Complexes as Anti-Cancer Drugs. (2016) *Arch Cancer Res* 4: 2.  
[Pubmed](#) | [Crossref](#) | [Others](#)

15. Heidari, A. "Simulation of Temperature Distribution of DNA/RNA of Human Cancer Cells Using Time-Dependent Bio-Heat Equation and Nd: YAG Lasers". (2016) *Arch Cancer Res* 4: 2.  
 Pubmed | Crossref | [Others](#)
16. Heidari, A. Quantitative Structure-Activity Relationship (QSAR) Approximation for Cadmium Oxide (CdO) and Rhodium (III) Oxide (Rh<sub>2</sub>O<sub>3</sub>) Nanoparticles as Anti-Cancer Drugs for the Catalytic Formation of Proviral DNA from Viral RNA Using Multiple Linear and Non-Linear Correlation Approach. (2016) *Ann Clin Lab Res* 4: 1.  
 Pubmed | Crossref | [Others](#)
17. Heidari A. Biomedical Study of Cancer Cells DNA Therapy Using Laser Irradiations at Presence of Intelligent Nanoparticles. (2016) *J Biomedical Sci* 5: 2.  
 Pubmed | [Crossref](#) | [Others](#)
18. Heidari, A. Measurement the Amount of Vitamin D<sub>2</sub> (Ergocalciferol), Vitamin D<sub>3</sub> (Cholecalciferol) and Absorbable Calcium (Ca<sup>2+</sup>), Iron (II) (Fe<sup>2+</sup>), Magnesium (Mg<sup>2+</sup>), Phosphate (PO<sup>4-</sup>) and Zinc (Zn<sup>2+</sup>) in Apricot Using High-Performance Liquid Chromatography (HPLC) and Spectroscopic Techniques. (2016) *J Biom Biostat* 7: 292.  
 Pubmed | [Crossref](#) | [Others](#)
19. Heidari, A. Spectroscopy and Quantum Mechanics of the Helium Dimer (He<sup>2+</sup>), Neon Dimer (Ne<sup>2+</sup>), Argon Dimer (Ar<sup>2+</sup>), Krypton Dimer (Kr<sup>2+</sup>), Xenon Dimer (Xe<sup>2+</sup>), Radon Dimer (Rn<sup>2+</sup>) and Ununoctium Dimer (Uuo<sup>2+</sup>) Molecular Cations. (2016) *J Chem Sci* 7: e112.  
 Pubmed | [Crossref](#) | [Others](#)
20. Heidari, A. Human Toxicity Photodynamic Therapy Studies on DNA/RNA Complexes as a Promising New Sensitizer for the Treatment of Malignant Tumors Using Bio-Spectroscopic Techniques. (2016) *J Drug Metab Toxicol* (2016) 7: e129.  
 Pubmed | [Crossref](#) | [Others](#)
21. Heidari, A. Novel and Stable Modifications of Intelligent Cadmium Oxide (CdO) Nanoparticles as Anti-Cancer Drug in Formation of Nucleic Acids Complexes for Human Cancer Cells' Treatment. (2016) *Biochem Pharmacol* (Los Angel) 5: 207.  
 Pubmed | [Crossref](#) | [Others](#)
22. Heidari, A. A Combined Computational and QM/MM Molecular Dynamics Study on Boron Nitride Nanotubes (BNNTs), Amorphous Boron Nitride Nanotubes (a-BNNTs) and Hexagonal Boron Nitride Nanotubes (h-BNNTs) as Hydrogen Storage. (2016) *Struct Chem Crystallogr Commun* 2: 1.  
 Pubmed | [Crossref](#) | [Others](#)
23. Heidari, A. Pharmaceutical and Analytical Chemistry Study of Cadmium Oxide (CdO) Nanoparticles Synthesis Methods and Properties as Anti-Cancer Drug and its Effect on Human Cancer Cells. (2016) *Pharm Anal Chem Open Access* 2: 113.  
 Pubmed | [Crossref](#) | [Others](#)
24. Heidari, A. A Chemotherapeutic and Biospectroscopic Investigation of the Interaction of Double-Standard DNA/RNA-Binding Molecules with Cadmium Oxide (CdO) and Rhodium (III) Oxide (Rh<sub>2</sub>O<sub>3</sub>) Nanoparticles as Anti-Cancer Drugs for Cancer Cells' Treatment. (2016) *Chemo Open Access* 5: e129.  
 Pubmed | [Crossref](#) | [Others](#)
25. Heidari, A. Pharmacokinetics and Experimental Therapeutic Study of DNA and Other Biomolecules Using Lasers: Advantages and Applications. (2016) *J Pharmacokinet Exp Ther* 1: e005.  
 Pubmed | [Crossref](#) | [Others](#)
26. Heidari, A. Determination of Ratio and Stability Constant of DNA/RNA in Human Cancer Cells and Cadmium Oxide (CdO) Nanoparticles Complexes Using Analytical Electrochemical and Spectroscopic Techniques. (2016) *Insights Anal Electrochem* 2: 1.  
 Pubmed | [Crossref](#) | [Others](#)
27. Heidari, A. Discriminate between Antibacterial and Non-Antibacterial Drugs Artificial Neural Networks of a Multilayer Perceptron (MLP) Type Using a Set of Topological Descriptors. (2016) *J Heavy Met Toxicity Dis.* 1: 2.  
 Pubmed | [Crossref](#) | [Others](#)
28. Heidari, A. Combined Theoretical and Computational Study of the Belousov-Zhabotinsky Chaotic Reaction and Curtius Rearrangement for Synthesis of Mechlorethamine, Cisplatin, Streptozotocin, Cyclophosphamide, Melphalan, Busulphan and BCNU as Anti-Cancer Drugs. (2016) *Insights Med Phys* 1: 2.  
 Pubmed | [Crossref](#) | [Others](#)
29. Heidari, A. A Translational Biomedical Approach to Structural Arrangement of Amino Acids' Complexes: A Combined Theoretical and Computational Study. (2016) *Transl Biomed* 7: 2.  
 Pubmed | [Crossref](#) | [Others](#)
30. Heidari, A. Ab Initio and Density Functional Theory (DFT) Studies of Dynamic NMR Shielding Tensors and Vibrational Frequencies of DNA/RNA and Cadmium Oxide (CdO) Nanoparticles Complexes in Human Cancer Cells. (2016) *J Nanomedicine Biotherapeutic Discov* 6: e144.  
 Pubmed | [Crossref](#) | [Others](#)
31. Heidari, A. Molecular Dynamics and Monte-Carlo Simulations for Replacement Sugars in Insulin Resistance, Obesity, LDL Cholesterol, Triglycerides, Metabolic Syndrome, Type 2 Diabetes and Cardiovascular Disease: A Glycobiological Study. (2016) *J Glycobiol* 5: e111.  
 Pubmed | [Crossref](#) | [Others](#)
32. Heidari, A. Synthesis and Study of 5-(Phenylsulfonyl) Amino-1,3,4-Thiadiazole-2-Sulfonamide as Potential Anti-Pertussis Drug Using Chromatography and Spectroscopy Techniques. (2016) *Transl Med* (Sunnyvale) 6: e138.  
 Pubmed | [Crossref](#) | [Others](#)
33. Heidari, A. Nitrogen, Oxygen, Phosphorus and Sulphur Heterocyclic Anti-Cancer Nano Drugs Separation in the Supercritical Fluid of Ozone (O<sub>3</sub>) Using Soave-Redlich-Kwong (SRK) and Peng-Robinson (PR) Equations. (2016) *Electronic J Biol* 12: 4.  
 Pubmed | [Crossref](#) | [Others](#)
34. Heidari, A. An Analytical and Computational Infrared Spectroscopic Review of Vibrational Modes in Nucleic Acids. (2016) *Austin J Anal Pharm Chem* 3(1): 1058.  
 Pubmed | [Crossref](#) | [Others](#)
35. Heidari, A., Brown, C. Phase, Composition and Morphology Study and Analysis of Os-Pd/HfC Nanocomposites. (2016) *Nano Res Appl* 2: 1.  
 Pubmed | [Crossref](#) | [Others](#)
36. Heidari, A., Brown, C. Vibrational Spectroscopic Study of Intensities and Shifts of Symmetric Vibration Modes of Ozone Diluted by Cumene. (2016) *International Journal of Advanced Chemistry* 4(1): 5-9.  
 Pubmed | [Crossref](#) | [Others](#)
37. Heidari, A. Study of the Role of Anti-Cancer Molecules with Different Sizes for Decreasing Corresponding Bulk Tumor Multiple Organs or Tissues. (2016) *Arch Can Res* 4: 2.  
 Pubmed | [Crossref](#) | [Others](#)
38. Heidari, A. Genomics and Proteomics Studies of Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin as Anti-Tumor, Peptide Antibiotics, Antiviral and Central Nervous System (CNS) Drugs. (2016) *J Data Mining Genomics & Proteomics* 7: e125.  
 Pubmed | [Crossref](#) | [Others](#)
39. Heidari, A. Pharmacogenomics and Pharmacoproteomics Studies of Phosphodiesterase-5 (PDE5) Inhibitors and Paclitaxel Albumin-Stabilized Nanoparticles as Sandwiched Anti-Cancer Nano Drugs between Two DNA/RNA Molecules of Human Cancer Cells. (2016) *J Pharmacogenomics Pharmacoproteomics* 7: e153.  
 Pubmed | [Crossref](#) | [Others](#)
40. Heidari, A. Biotranslational Medical and Biospectroscopic Studies of Cadmium Oxide (CdO) Nanoparticles-DNA/RNA Straight and Cycle Chain Complexes as Potent Anti-Viral, Anti-Tumor and Anti-Microbial Drugs: A Clinical Approach. (2016) *Transl Biomed* 7: 2.  
 Pubmed | [Crossref](#) | [Others](#)

41. Heidari, A. A Comparative Study on Simultaneous Determination and Separation of Adsorbed Cadmium Oxide (CdO) Nanoparticles on DNA/RNA of Human Cancer Cells Using Biospectroscopic Techniques and Dielectrophoresis (DEP) Method. (2016) *Arch Can Res* 4: 2. [Pubmed](#) | [Crossref](#) | [Others](#)
42. Heidari, A. Cheminformatics and System Chemistry of Cisplatin, Carboplatin, Nedaplatin, Oxaliplatin, Heptaplatin and Lobaplatin as Anti-Cancer Nano Drugs: A Combined Computational and Experimental Study. (2016) *J Inform Data Min* 1: 3. [Pubmed](#) | [Crossref](#) | [Others](#)
43. Heidari, A. Linear and Non-Linear Quantitative Structure-Anti-Cancer-Activity Relationship (QSACAR) Study of Hydrrous Ruthenium (IV) Oxide (RuO<sub>2</sub>) Nanoparticles as Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTIs) and Anti-Cancer Nano Drugs. (2016) *J Integr Oncol* 5: e110. [Pubmed](#) | [Crossref](#) | [Others](#)
44. Heidari, A. Synthesis, Characterization and Biospectroscopic Studies of Cadmium Oxide (CdO) Nanoparticles-Nucleic Acids Complexes Absence of Soluble Polymer as a Protective Agent Using Nucleic Acids Condensation and Solution Reduction Method. (2016) *J Nanosci Curr Res* 1: e101. [Pubmed](#) | [Crossref](#) | [Others](#)
45. Heidari, A. Coplanarity and Collinearity of 4'-Dinonyl-2,2'-Bithiazole in One Domain of Bleomycin and Pingyangmycin to be Responsible for Binding of Cadmium Oxide (CdO) Nanoparticles to DNA/RNA Bidentate Ligands as Anti-Tumor Nano Drug. (2016) *Int J Drug Dev & Res* 8: 007-008. [Pubmed](#) | [Crossref](#) | [Others](#)
46. Heidari, A. A Pharmacovigilance Study on Linear and Non-Linear Quantitative Structure (Chromatographic) Retention Relationships (QSRR) Models for the Prediction of Retention Time of Anti-Cancer Nano Drugs under Synchrotron Radiations. (2016) *J Pharmacovigil* 4: e161. [Pubmed](#) | [Crossref](#) | [Others](#)
47. Heidari, A. Nanotechnology in Preparation of Semipermeable Polymers. (2016) *J Adv Chem Eng* 6: 157. [Pubmed](#) | [Crossref](#) | [Others](#)
48. Heidari, A. A Gastrointestinal Study on Linear and Non-Linear Quantitative Structure (Chromatographic) Retention Relationships (QSRR) Models for Analysis 5-Aminosalicylates Nano Particles as Digestive System Nano Drugs under Synchrotron Radiations. (2016) *J Gastrointest Dig Syst* 6: e119. [Pubmed](#) | [Crossref](#) | [Others](#)
49. Heidari, A. DNA/RNA Fragmentation and Cytolysis in Human Cancer Cells Treated with Diphthamide Nano Particles Derivatives. (2016) *Biomedical Data Mining* 5: e102. [Pubmed](#) | [Crossref](#) | [Others](#)
50. Heidari, A. A Successful Strategy for the Prediction of Solubility in the Construction of Quantitative Structure-Activity Relationship (QSAR) and Quantitative Structure-Property Relationship (QSPR) under Synchrotron Radiations Using Genetic Function Approximation (GFA) Algorithm. (2016) *J Mol Biol Biotechnol* 1: 1. [Pubmed](#) | [Crossref](#) | [Others](#)
51. Heidari, A. Computational Study on Molecular Structures of C<sub>20</sub>, C<sub>60</sub>, C<sub>240</sub>, C<sub>540</sub>, C<sub>960</sub>, C<sub>2160</sub> and C<sub>3840</sub> Fullerene Nano Molecules under Synchrotron Radiations Using Fuzzy Logic. (2016) *J Material Sci Eng* 5: 282. [Pubmed](#) | [Crossref](#) | [Others](#)
52. Heidari, A. Graph Theoretical Analysis of Zigzag Polyhexamethylene Biguanide, Polyhexamethylene Adipamide, Polyhexamethylene Biguanide Gauze and Polyhexamethylene Biguanide Hydrochloride (PHMB) Boron Nitride Nanotubes (BNNTs), Amorphous Boron Nitride Nanotubes (a-BNNTs) and Hexagonal Boron Nitride Nanotubes (h-BNNTs). (2016) *J Appl Computat Math* 5: e143. [Pubmed](#) | [Crossref](#) | [Others](#)
53. Heidari, A. The Impact of High Resolution Imaging on Diagnosis. (2016) *Int J Clin Med Imaging* 3: 1000e101. [Pubmed](#) | [Crossref](#) | [Others](#)
54. Heidari, A. A Comparative Study of Conformational Behavior of Isotretinoin (13-Cis Retinoic Acid) and Tretinoin (All-Trans Retinoic Acid (ATRA)) Nano Particles as Anti-Cancer Nano Drugs under Synchrotron Radiations Using Hartree-Fock (HF) and Density Functional Theory (DFT) Methods. (2016) *Insights in Biomed* 1: 2. [Pubmed](#) | [Crossref](#) | [Others](#)
55. Heidari, A. Advances in Logic, Operations and Computational Mathematics. (2016) *J Appl Computat Math* 5: 5. [Pubmed](#) | [Crossref](#) | [Others](#)
56. Heidari, A. Mathematical Equations in Predicting Physical Behavior. (2016) *J Appl Computat Math* 5: 5. [Pubmed](#) | [Crossref](#) | [Others](#)
57. Heidari, A. Chemotherapy a Last Resort for Cancer Treatment. (2016) *Chemo Open Access* 5: 4. [Pubmed](#) | [Crossref](#) | [Others](#)
58. Heidari, A. Separation and Pre-Concentration of Metal Cations-DNA/RNA Chelates Using Molecular Beam Mass Spectrometry with Tunable Vacuum Ultraviolet (VUV) Synchrotron Radiation and Various Analytical Methods. (2016) *Mass Spectrom Purif Tech* 2: e101. [Pubmed](#) | [Crossref](#) | [Others](#)
59. Heidari, A. Yoctosecond Quantitative Structure-Activity Relationship (QSAR) and Quantitative Structure-Property Relationship (QSPR) under Synchrotron Radiations Studies for Prediction of Solubility of Anti-Cancer Nano Drugs in Aqueous Solutions Using Genetic Function Approximation (GFA) Algorithm. (2016) *Insight Pharm Res* 1: 1. [Pubmed](#) | [Crossref](#) | [Others](#)
60. Heidari, A. Cancer Risk Prediction and Assessment in Human Cells under Synchrotron Radiations Using Quantitative Structure Activity Relationship (QSAR) and Quantitative Structure Properties Relationship (QSPR) Studies. (2016) *Int J Clin Med Imaging* 3: 516. [Pubmed](#) | [Crossref](#) | [Others](#)
61. Heidari, A. A Novel Approach to Biology, Electronic. (2016) *J Biol* 12: 4. [Pubmed](#) | [Crossref](#) | [Others](#)
62. Heidari, A. Innovative Biomedical Equipment's for Diagnosis and Treatment. (2016) *J Bioengineer & Biomedical Sci* 6: 2. [Pubmed](#) | [Crossref](#) | [Others](#)
63. Heidari, A. Integrating Precision Cancer Medicine into Healthcare, Medicare Reimbursement Changes and the Practice of Oncology. Trends in Oncology Medicine and Practices. (2016) *J Oncol Med & Pract* 1: 2. [Pubmed](#) | [Crossref](#) | [Others](#)
64. Heidari, A. Promoting Convergence in Biomedical and Biomaterials Sciences and Silk Proteins for Biomedical and Biomaterials Applications: An Introduction to Materials in Medicine and Bioengineering Perspectives. (2016) *J Bioengineer & Biomedical Sci* 6: 3. [Pubmed](#) | [Crossref](#) | [Others](#)
65. Heidari, A. X-Ray Fluorescence and X-Ray Diffraction Analysis on Discrete Element Modeling of Nano Powder Metallurgy Processes in Optimal Container Design. (2017) *J Powder Metall Min* 6: 1. [Pubmed](#) | [Crossref](#) | [Others](#)
66. Heidari, A. Biomolecular Spectroscopy and Dynamics of Nano-Sized Molecules and Clusters as Cross-Linking-Induced Anti-Cancer and Immune-Oncology Nano Drugs Delivery in DNA/RNA of Human Cancer Cells' Membranes under Synchrotron Radiations: A Payload-Based Perspective. (2017) *Arch Chem Res* 1: 2. [Pubmed](#) | [Crossref](#) | [Others](#)
67. Heidari, A. Deficiencies in Repair of Double-Standard DNA/RNA-Binding Molecules Identified in Many Types of Solid and Liquid Tumors Oncology in Human Body for Advancing Cancer Immunotherapy Using Computer Simulations and Data Analysis. (2017) *J Appl Bioinforma Comput Biol* 6: 1. [Pubmed](#) | [Crossref](#) | [Others](#)

68. Heidari, A. Electronic Coupling among the Five Nanomolecules Shuts Down Quantum Tunneling in the Presence and Absence of an Applied Magnetic Field for Indication of the Dimer or other Provide Different Influences on the Magnetic Behavior of Single Molecular Magnets (SMMs) as Qubits for Quantum Computing. (2017) Glob J Res Rev 4: 2.

Pubmed | [Crossref](#) | [Others](#)

69. Heidari, A. Polymorphism in Nano-Sized Graphene Ligand-Induced Transformation of Au<sub>38-x</sub>Ag<sub>x</sub>/xCu<sub>x</sub>(SPh-tBu)<sub>24</sub> to Au<sub>36-x</sub>Ag<sub>x</sub>/xCu<sub>x</sub>(SPh-tBu)<sub>24</sub> (x = 1-12) Nanomolecules for Synthesis of Au<sub>144-x</sub>Ag<sub>x</sub>/xCu<sub>x</sub>(SR)<sub>60</sub>, (SC<sub>4</sub>)<sub>60</sub>, (SC<sub>6</sub>)<sub>60</sub>, (SC<sub>12</sub>)<sub>60</sub>, (PET)<sub>60</sub>, (p-MBA)<sub>60</sub>, (F)<sub>60</sub>, (Cl)<sub>60</sub>, (Br)<sub>60</sub>, (I)<sub>60</sub>, (At)<sub>60</sub>, (Uus)<sub>60</sub> and (SC<sub>6H13</sub>)<sub>60</sub>. Nano Clusters as Anti-Cancer Nano Drugs. (2017) J Nanomater Mol Nanotechnol 6: 3.

Pubmed | [Crossref](#) | [Others](#)

70. Heidari, A. Biomedical Resource Oncology and Data Mining to Enable Resource Discovery in Medical, Medicinal, Clinical, Pharmaceutical, Chemical and Translational Research and Their Applications in Cancer Research. (2017) Int J Biomed Data Min 6: e103.

Pubmed | [Crossref](#) | [Others](#)

71. Heidari, A. Study of Synthesis, Pharmacokinetics, Pharmacodynamics, Dosing, Stability, Safety and Efficacy of Olympiadane Nanomolecules as Agent for Cancer Enzymotherapy, Immunotherapy, Chemotherapy, Radiotherapy, Hormone Therapy and Targeted Therapy under Synchrotron Radiation. (2017) J Dev Drugs 6: e154.

Pubmed | [Crossref](#) | [Others](#)

72. Heidari, A. A Novel Approach to Future Horizon of Top Seven Biomedical Research Topics to Watch in 2017: Alzheimer's, Ebola, Hypersomnia, Human Immunodeficiency Virus (HIV), Tuberculosis (TB), Microbiome/Antibiotic Resistance and Endovascular Stroke. (2017) J Bioengineer & Biomedical Sci 7: e127.

Pubmed | [Crossref](#) | [Others](#)

73. Heidari, A. Opinion on Computational Fluid Dynamics (CFD) Technique. (2017) Fluid Mech Open Acc 4: 157.

Pubmed | [Crossref](#) | [Others](#)

74. Heidari, A. Concurrent Diagnosis of Oncology Influence Outcomes in Emergency General Surgery for Colorectal Cancer and Multiple Sclerosis (MS) Treatment Using Magnetic Resonance Imaging (MRI) and Au<sub>329</sub>(SR)<sub>84</sub>, Au<sub>329-x</sub>Ag<sub>x</sub>(SR)<sub>84</sub>, Au<sub>144</sub>(SR)<sub>60</sub>, Au<sub>68</sub>(SR)<sub>36</sub>, Au<sub>30</sub>(SR)<sub>18</sub>, Au<sub>102</sub>(SPh)<sub>44</sub>, Au<sub>38</sub>(SPh)<sub>24</sub>, Au<sub>38</sub>(SC<sub>2H4Ph</sub>)<sub>24</sub>, Au<sub>21S</sub>(SAdm)<sub>15</sub>, Au<sub>36</sub>(pMBA)<sub>24</sub> and Au<sub>25</sub>(pMBA)<sub>18</sub> Nano Clusters. (2017) J Surgery Emerg Med 1: 21.

Pubmed | [Crossref](#) | [Others](#)