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!***** PROGRAM FOR GENERATION OF 3D STRUCTURE FROM DDSCAT READABLE
BY JMOL CALL TARGET *****
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! JMOL can be downloaded at : http://jmol.sourceforge.net/
!
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*****
! you must compile this program in the folder containing DDSCAT structure files with a fortran
compiler e.g gfortran, ifort...
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    program targettoxyz

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        integer :: Nspheres
        integer :: i,j,k,dum
        integer, allocatable :: X(:),Y(:),Z(:) !      Coordinates of nanospheres position

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!
*****
*****
!***** READING POSITION OF GOLD NANOSPHERES in 'target.out' file of
DDSCAT *****
!
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*****

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```

        open(80,file='target.out')
        read(80,*)
        read(80,*) Nspheres
        allocate(X(Nspheres))
        allocate(Y(Nspheres))
        allocate(Z(Nspheres))
        read(80,*)
        read(80,*)
        read(80,*)
        read(80,*)
        read(80,*)
        do i=1,Nspheres
        read(80,*) dum,X(i),Y(i),Z(i),dum,dum,dum
        enddo
        close(80)

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*****
*****
!***** GENERATING .xyz STRUCTURE FILE FOR JMOL
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```
    open(80,file='target.xyz')
write(80,*) Nspheres
write(80,*)
do i=1,Nspheres
    write(80,*) 'Au',X(i),Y(i),Z(i)
enddo
close(80)
```

```
end program targettoxyz
```