

## 27. MOLECULAR FRAGMENTS MAKING UP THE WHOLE MOLECULE; CLOSE-PACKED VOLUME ELEMENTS MAKING UP THE WHOLE SPECIMEN

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In this contribution, by calculating the induced field due to a macroscopic magnetized specimen at points outside the specimen using the summing procedure<sup>3</sup> even at such closer distances where till now the application of the simple point dipole approximation had been found unreliable, it is intended to point out that this procedure seems to make the trends of shielding factors more conveniently and understandably tractable for interpretation.

Thus the overall trend in adapting this procedure of summing up induced field contributions is that in the case of Shielding Tensor Calculations, from the confidence gained by the application<sup>1</sup> to intermolecular case the approach could be found reasonable for even the intramolecular values<sup>2</sup>, which means internal to the specified molecule. On the other hand with the confidence gained by the application<sup>3</sup> to the Demagnetization factor calculations which is a case of contributions internal to the macroscopic specimen - and hence the semi-micro volume elements and their contributions to the induced fields are all centered inside the magnetized specimen, the procedure is now being found as an effective one for considering the fields due to a specimen around (outside) the same magnetized specimens for which Demagnetization factors were calculated. A comprehensive realization of the simplicity of this procedure would be enabled by applying these considerations to the various contexts where induced field contributions, their origin and the values, have to be ascertained. These considerations would be reviewed to emphasize that this simple procedure, of summing up contributions by dividing and fragmenting the contributing-whole, provides an approach leading the approximations to yield the actual limiting values.

**REFERENCES**

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