Abstract

The T-matrix method is one of the most powerful and widely used theoretical techniques for the computation of electromagnetic scattering by single and composite particles, discrete random media, and particles in the vicinity of an interface separating two half-spaces with different refractive indices. This paper presents a comprehensive database of T-matrix publications since the inception of the technique in 1965 through early 2004.

Keywords: Electromagnetic scattering; T-matrix method

1. Introduction

Since its formulation in 1965, the T-matrix method has become one of the most powerful, versatile, and popular theoretical techniques for treating electromagnetic, acoustic, and elastodynamic scattering by particles and surfaces. The most recent attempt to outline the vast realm of this technique and its practical applications by compiling a comprehensive publication database dates back to 1988 (Varadan et al., 1988); that list included 151 references. Although to attempt a similar compilation now would be very...
important, it is next to impossible. To make the task both useful and practicable, one has to be selective and to adhere firmly to well defined and meaningful guidelines. The three most important restrictions that we have adopted for this database are the following:

- With a few important exceptions, the database includes only publications dealing with electromagnetic scattering.
- As a rule, publications on scattering by isolated infinite cylinders and systems of parallel infinite cylinders in unbounded space are excluded.
- The database includes only references to books, peer-reviewed book chapters, and peer-reviewed journal papers.

Even with these restrictions, the database contains more than 700 references.

A critical issue that we faced at the outset of this project was to agree on a definition of the $T$-matrix method. The concept of a $T$ matrix has evolved quite dramatically since it was first introduced by P.C. Waterman in 1965. From being a minor bi-product of the extended boundary condition method, it has become the centerpiece of a vast domain of wave scattering science. We hope that we will not step on too many toes by suggesting the following definition:

In the $T$-matrix method, the incident and scattered electric fields are expanded in series of suitable vector spherical wave functions, and the relation between the columns of the respective expansion coefficients is established by means of a transition matrix (or $T$ matrix). This concept can be applied to the entire scatterer as well as to separate parts of a composite scatterer.

It is clear that in the framework of this definition, the classical Lorenz–Mie theory for homogeneous isotropic spheres and its generalizations for inhomogeneous spherically symmetric particles become a particular case of the $T$-matrix approach. Therefore, another inescapable restriction that we had to impose on this database was to exclude all references dealing with individual spherically symmetric scatterers. We hope that the reference list of the recent monograph by Babenko et al. (2003) will be at least a partial remedy for this deficiency.

In addition to compiling a unified masterlist of $T$-matrix publications on electromagnetic scattering by particles, we have tried to make the database more useful by classifying the various references into a set of narrower subject categories (Sections 2 and 3). Depending on the specific content of a publication, it may appear in one or several subject categories. The choice of the subject categories, especially categories such as Seminal publications, and assigning a publication to a category are somewhat subjective and are open to criticism. We feel, however, that the pros of this endeavor in terms of its utility to various categories of customers far outweigh its potential cons.

What we have not done in this paper is to assess the validity and importance of the results described in the specific publications included in the database. It is not inconceivable that some of the publications contain wrong results or duplicate results obtained in earlier publications. We believe that a critical assessment of the $T$-matrix publications should be the subject of a book or a review and is beyond the scope of this paper. Therefore, the reader should keep in mind that the inclusion of a publication in this database does not constitute any formal endorsement or quality certification on our part.

We realize that even with the restrictions adopted, it will be impossible to publish in a research journal another comprehensive database like this one even in a few years from now (see Fig. 1). However, we plan to maintain an updated version of this database on the web site http://www.giss.nasa.gov/~crmim
and ask the readers to help us in this endeavor by sending corrections and missing references to existing and future publications on the $T$-matrix method and its various applications.

2. Particles in infinite homogeneous space

2.1. Seminal publications

This subsection references the publications in which the $T$-matrix method was originally developed as well as those in which a major generalization or improvement of the $T$-matrix method was proposed.

Bruning and Lo (1971a)  
Khlebtsov (1992)  
Lakhtakia et al. (1983)  
Mackowski and Mishchenko (1996)  
Mishchenko (1991a)  
Peterson and Ström (1973)  
Peterson and Ström (1974)  
Rozenberg (1974)  
Schulz et al. (1999a)  
Tsang and Kong (1980)  
Varadan and Varadan (1980a)  
Varadan et al. (1979)  
Waterman (1965)  
Waterman (1969)  
Waterman (1971)
2.2. Books

| Borghese et al. (2003)          | Tsang et al. (1985)   |
| Doicu et al. (2000c)            | Tsang et al. (2001)   |
| Mishchenko et al. (2002)        | Varadan and Varadan (1980b) |
| Rozenberg (1974)                |                       |

2.3. Reviews

| Barber (1980)                   | Mishchenko et al. (2000b) |
| Mishchenko et al. (1996b)       | Waterman (1980)          |

2.4. Extended boundary condition method and its modifications and generalizations

| Al-Badwaihy and Yen (1975)      | Iskander et al. (1983)   |
| Babenko (1997)                  | Iskander et al. (1989b)  |
| Barber and Yeh (1975)           | Lakhtakia et al. (1984b) |
| Bates and Wall (1977)           | Morita (1979)            |
| Bringi and Seliga (1977b)       | Ström (1975)             |
| Doicu and Wriedt (1997c)        | Wang et al. (1994)       |
| Doicu and Wriedt (2001c)        | Waterman (1971)          |
| Doicu and Wriedt (2001d)        | Waterman (1979)          |
| Doicu et al. (1999b)            | Wriedt and Doicu (1997)  |
| Iskander et al. (1982)          |                           |

2.5. T-matrix theory and computations for anisotropic and chiral scatterers

| Kiselev et al. (2002)           | Liu et al. (2000b)      |
2.6. Superposition T-matrix method and its modifications, including related mathematical tools

Auger and Stout (2003)  
Auger et al. (2001)  
Borghese et al. (1979)  
Borghese et al. (1980)  
Borghese et al. (1994)  
Boström et al. (1991)  
Bruning and Lo (1971a)  
Bruning and Lo (1971b)  
Chew (1990)  
Chew et al. (1990)  
Cruzan (1962)  
Chew and Wang (1993)  
Danos and Maximon (1965)  
Fikioris and Uzunoglu (1979)  
Fuller (1994)  
Fuller and Kattawar (1988a)  
Fuller and Kattawar (1988b)  
Gérardy and Ausloos (1982)  
Hamid et al. (1990b)  
Mackowski (1991)  
Mackowski (1994)  
Mackowski (2001)  
Mackowski and Mishchenko (1996)  
Mishchenko and Mackowski (1996)  
Miyazaki and Jimba (2000)  
Ngo et al. (1996)  
Ngo et al. (1997)  
Peterson (1977)  
Peterson and Ström (1973)  
Rozenberg (1974)  
Saija et al. (2003b)  
Siqueira and Sarabandi (2000)  
Stein (1961)  
Stout et al. (2001)  
Stout et al. (2002a)  
Ström (1974)  
Tzeng and Fung (1994)  
Videen and Bickel (1991)  
Videen and Ngo (1998)  
Videen et al. (1995)  
Videen et al. (1996)  
Wang and Chew (1993)  
Wittmann (1988)  
Xu (1996a)  
Xu (1996b)  
Xu (1997b)  
Xu (1998b)  
Xu (1996b)  
Xu (1997b)  
Xu (1998b)

2.7. T-matrix theory of electromagnetic scattering by infinite periodic arrays of particles

Modinos (1987)  
Peterson (1977)  
Varadan (1980)  
Waterman and Pedersen (1986)

2.8. T-matrix theory and computations of electromagnetic scattering by discrete random media

Bringi et al. (1982a)  
Bringi et al. (1982b)  
Bringi et al. (1983)  
Chew (1989)  
Chen et al. (2003)  
Chew et al. (1990)  
Doicu and Wriedt (2001a)  
Guo et al. (2001)  
Lu et al. (1995)  
Ma et al. (1988)  
Neo et al. (1999)  
Siqueira and Sarabandi (2000)  
Stefanou and Modinos (1993)  
Tishkovets (2002)  
Tishkovets and Mishchenko (2004)  
Tishkovets et al. (2002)  
Tishkovets et al. (2004a)  
Tsang (1984)  
Tsang and Kong (1982)  
Tsang and Kong (1983)
2.9. Relation of the T-matrix method to other theoretical approaches

Doicu and Wriedt (1999)   Nieminen et al. (2003a)
Doicu et al. (1999b)      Rother (1998)
Doicu et al. (2000b)      Rother et al. (2002)
Eremin (1998)             Schulz et al. (1998a)
Kahnert et al. (2003)     Zurk et al. (1996)
Kleinman et al. (1984)

2.10. Symmetry properties of the T matrix and analytical orientation averaging approaches

Battaglia et al. (2001b)  Mishchenko (1991e)
Borghese et al. (1984b)   Mishchenko (1992a)
Fucile et al. (1993)      Paramonov (1994c)
Kahnert et al. (2001a)    Paramonov (1995b)
Khlebtsov (1992)          Schulz et al. (1999a)
Mishchenko (1990b)        Tsang et al. (1984)
Mishchenko (1990c)        Varadan (1980)
Mishchenko (1990d)        Varadan and Varadan (1980a)
Mishchenko (1991c)
2.11. Convergence of various implementations of the T-matrix method

Ding and Xu (1999)               Mishchenko et al. (1996a)
Doicu et al. (2000b)            Ramm (1982)
Kahnert et al. (2001b)          Ström and Zheng (1987)
Lakhtakia et al. (1984a)        Wiscombe and Mugnai (1986)
Lapalme and Patitsas (1993a)

2.12. Benchmark T-matrix results

By benchmark numerical results we understand numbers with at least 3 correct first significant decimals. The accuracy of the numbers must be established by either comparisons with results generated by an independent method or by implementing a reliable internal convergence test.

Kuik et al. (1992)               Mishchenko et al. (1996a)
Mishchenko (1991a)               Voshchinnikov et al. (2000)
Mishchenko (2000)

2.13. T-matrix calculations for homogeneous spheroids

Abdulkin and Paramonov (2001)  Barber (1977a)
Alpers et al. (2001)            Barber (1977b)
Astafieva and Babenko (1999)    Barber (1978)
Aydin and Zhao (1990)            Barber and Yeh (1975)
Aydin et al. (1989)             Barber et al. (1982)
Aydin et al. (1998)             Barber et al. (1983a)
Babenko and Petrov (2002)       Barber et al. (1983b)
Bantges et al. (1999)           Battaglia et al. (2001a)
Baran et al. (1998)             Battaglia et al. (2001b)
Brogniez et al. (2003) Höpfner et al. (2001)
Cline et al. (1986) Iskander and Lakhtakia (1984)
Crosta et al. (2003) Iskander et al. (1983)
Czekala (1998) Iskander et al. (1986)
Czekala and Simmer (1998) Iskander et al. (1989a)
Czekala and Simmer (2002) Iskander et al. (1989b)
Czekala et al. (2001a) Jalava et al. (1998)
Czekala et al. (2001b) Joshi et al. (2003)
Dlugach et al. (2002a) Kahnert et al. (2002a)
Dlugach et al. (2002b) Kahnert et al. (2002b)
Doicu and Wriedt (1997a) Keenan et al. (2001)
Doicu and Wriedt (1997b) Kerola and Larson (2001)
Doicu and Wriedt (1997c) Khlebtsov and Mel’nikov (1995)
Doicu et al. (1997) Khlebtsov et al. (1996a)
Doicu et al. (1998) Khlebtsov et al. (1996b)
Doicu et al. (1999b) Khlebtsov et al. (1999a)
Doicu et al. (2000b) Khlebtsov et al. (1999b)
Dubovik et al. (2002) Kollias et al. (2001)
Fueglistaler et al. (2003) Kolokolova et al. (1997)
Geller et al. (1985) Kouzoubov et al. (1998)
Haferman et al. (1997) Kuik et al. (1994)
Sakai et al. (2003)  Voshchinnikov et al. (2000)
Schulz et al. (1998a)  Wang et al. (1980)
Schulz et al. (1998b)  Warner (1975)
Schulz et al. (1999b)  Warner and Hizal (1976)
Seliga and Bringi (1978)  Waterman (1971)
Streekstra et al. (1994)  Wirth et al. (1999)
Troitsky et al. (2001)  Xing and Greenberg (1994a)
Troitsky et al. (2003)  Xing and Greenberg (1994b)
Tsang et al. (1984)  Yeh et al. (1982b)
Veihelmann et al. (2004)

2.14. T-matrix calculations for Chebyshev and generalized Chebyshev particles

Battaglia et al. (2001b)  Mishchenko (1991d)
Ding and Xu (1999)  Mishchenko and Travis (1994b)
Mishchenko (1990c)  Wiscombe and Mugnai (1986)
Mishchenko (1991a)

2.15. T-matrix calculations for finite circular cylinders

2.16. T-matrix calculations for various rotationally symmetric particles

Barber and Yeh (1975)               Ström and Zheng (1987)
Bringi and Seliga (1977a)           Videen et al. (1996)
Doicu and Wriedt (1997c)          Waterman (1965)
Lakhtakia and Iskander (1983a)     Waterman (1973)
Lakhtakia et al. (1983)           Waterman (1979)
Mishchenko and Videen (1999)            Yeh et al. (1982a)
Mishchenko and Lacis (2003)            Yeh et al. (1982b)
2.17. T-matrix calculations for ellipsoids, polyhedral scatterers, and other particles lacking axial symmetry

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<td>Baran and Francis (2004)</td>
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<td>Havemann and Baran (2001)</td>
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<td>Kahnert et al. (2001a)</td>
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<td>Kahnert et al. (2001b)</td>
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2.18. T-matrix calculations for layered and composite particles

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<td>Aydin and Zhao (1990)</td>
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<td>Aydin et al. (1983)</td>
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<td>Bringi and Seliga (1977a)</td>
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<td>Cooper et al. (1983)</td>
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<td>Hizal (1980)</td>
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<td>Hofer and Glatter (1989)</td>
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<td>Mazumder et al. (1992)</td>
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<td>Wang and Barber (1979)</td>
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2.19. T-matrix calculations for clusters of homogeneous spheres

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<td>Abel et al. (2003)</td>
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<td>de Daran et al. (1995)</td>
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<td>Fuller and Kattawar (1988a)</td>
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2.20. T-matrix calculations for clusters of layered spheres

Borghese et al. (1987a)  Khlebtsov et al. (2004b)
Hamid et al. (2003)

2.21. T-matrix calculations for clusters of nonspherical monomers

Cruz et al. (1989)  Şahin and Miller (1998)
Huang and Jin (1998)  Vargas et al. (1993)
Jin and Huang (1996b)  Xu (2003a)

2.22. T-matrix calculations for particles with one or several (eccentric) inclusions

Borghese et al. (1992)  Pellegrino et al. (1997)
Borghese et al. (1994)  Pinnick et al. (2000)
Chýlek et al. (1998)  Skaropoulos et al. (1994)
Doicu and Wriedt (2001a)  Secker et al. (2000)
Fikioris and Uzunoglu (1979)  Simão et al. (2001)
Fuller (1995b)  Skaropoulos et al. (1996)
Jones (1995)  Videen et al. (1997b)
Mackowski and Jones (1995)

2.23. T-matrix calculations of optical resonances in nonspherical particles

Arnold et al. (1994)  Borghese et al. (1987a)
Fuller et al. (1986)               Ngo and Pinnick (1994)
Khlebtsov et al. (1996a)          Simão et al. (2001)
Khlebtsov et al. (2004a)          Tzeng et al. (1985)
Mishchenko and Lacis (2003)

2.24. T-matrix calculations of optical forces and torques on small particles

Bayoudh et al. (2003)             Nieminen et al. (2001a)
Bishop et al. (2003)              Nieminen et al. (2001b)
Mishchenko (1991e)                Saija et al. (2003a)

2.25. T-matrix calculations of internal, surface, and local fields

Astafieva and Babenko (1999)      Lakhtakia et al. (1983)
Babenko and Petrov (2002)         Lakhtakia et al. (1984c)
Barber et al. (1983a)             Nilsson et al. (1998)
Barber et al. (1983b)             Şahin and Miller (1998)
Bringi and Seliga (1980)          Stout et al. (2002b)
Cline et al. (1986)               Tishkovets (1998)
Cruz et al. (1989)                Vargas et al. (1993)
Lakhtakia et al. (1981)           Xu (2003c)
Lakhtakia et al. (1982a)          Xu (2004)

2.26. Illumination by focused beams and non-plane waves

Bayoudh et al. (2003)             Lakhtakia et al. (1982b)
Bishop et al. (2003)              Li et al. (2001)
Doicu and Wriedt (1997a)          Nieminen et al. (2003b)
Doicu and Wriedt (1997e)          Yeh et al. (1982b)
Lakhtakia et al. (1982a)          —
2.27. Use of T-matrix calculations for testing other theoretical techniques

Andersen et al. (2002)  Lopatin et al. (1987)
Baran et al. (1998)  Mishchenko (1990d)
Baran et al. (2001b)  Mishchenko (1991b)
Chýlek and Videen (1998)  Paramonov et al. (1986a)
Comberg and Wriedt (1999)  Paramonov et al. (1986b)
Doicu et al. (2000b)  Paramonov et al. (1989)
Havemann et al. (2003)  Schulz et al. (1998a)
Iskander et al. (1989a)  Videen et al. (1994)
Kahnert et al. (2001a)  Voshchinnikov et al. (2000)
Latimer and Barber (1978)  Zhao et al. (2003)
Liu et al. (1998)  

2.28. Comparisons of T-matrix and effective-medium-approximation results

Botet et al. (1997)  Gustafson et al. (2001)
Doicu and Wriedt (2001a)  Videen et al. (1994)
Fonseca et al. (1994)  
Fuller et al. (1999)  Zurk et al. (1996)
2.29. Comparisons of T-matrix and controlled laboratory results

Arnold et al. (1994)  Ruppin (1990)
Borghese et al. (1989)  Varadan et al. (1983)
Bringi and Seliga (1977a)  West et al. (1994)
Bringi and Seliga (1977b)  Xu (1997a)
Bruning and Lo (1971b)  Xu (1998a)
Fuller et al. (1986)  Xu and Gustafson (1997)
Kattawar and Dean (1983)  Xu and Gustafson (1999)

2.30. Use of T-matrix calculations for analyzing laboratory data

Doicu et al. (1998)  Quinten et al. (2000)
Fonseca et al. (1993)  Quirantes and Delgado (1995a)
Khlebtsov et al. (1994)  Varadan et al. (1985a)
Krieger et al. (2004)  Videen et al. (1997a)
Lambert et al. (2003)  Videen et al. (1997b)
Miyazaki et al. (2002)  Volten et al. (1999)
Miyazaki et al. (2004)  

2.31. T-matrix modeling of scattering properties of mineral aerosols in the terrestrial atmosphere and soil particles

2.32. T-matrix modeling of scattering properties of carbonaceous and soot aerosols and soot-containing aerosol and cloud particles

Chýlek et al. (1995) Quinten et al. (2002)
Chýlek et al. (1996) Roessler et al. (1983)
Fuller et al. (1999) Videen et al. (1994)

2.33. T-matrix modeling of scattering properties of cirrus cloud particles

Bantges et al. (1999) Lee et al. (2003)
Baran et al. (2001a) Mishchenko et al. (1997b)
Baran et al. (2001b) Mitchell et al. (2001)
Battaglia et al. (2001a) Peter et al. (2003)
Borrmann et al. (1996) Prodi et al. (1999)
Borrmann et al. (2000) Saija et al. (2001b)
Francis et al. (1999) Troitsky et al. (2001)
Hogan et al. (2000) Yang et al. (2003)
2.34. T-matrix modeling of scattering properties of hydrometeors

Aydin and Walsh (1999)  Kollias et al. (2001)
Aydin and Zhao (1990)  Kollias et al. (2002)
Aydin et al. (1998)  Mishchenko (1992a)
Battaglia et al. (2001b)  Prodi et al. (1999)
Carey et al. (2000)  Seliga and Bringi (1978)
Czekala et al. (2001a)  Wang and Barber (1979)
Hubbert and Bringi (2003)  Yeh et al. (1982a)
Ioannidou et al. (1999)  Zrnić et al. (2000)

2.35. T-matrix modeling of scattering properties of terrestrial stratospheric aerosol and cloud particles

Carslaw et al. (1998a)  Luo et al. (2003)
Carslaw et al. (1998b)  Reichardt et al. (2000)
Flesia et al. (1994)  Toon et al. (1990)
Fueglistaler et al. (2002)  Toon et al. (2000)
Fueglistaler et al. (2003)  Tsias et al. (1999)
Höpfner et al. (2001)  Wirth et al. (1999)

2.36. T-matrix modeling of scattering properties of noctilucent cloud particles

Mishchenko (1992c)
2.37. **T-matrix modeling of scattering properties of hydrosol particles**

Kouzoubov et al. (1998)
Kouzoubov et al. (1999)
Morel et al. (2002)

2.38. **T-matrix modeling of scattering properties of aerosol and cloud particles in planetary atmospheres**

Dlugach and Mishchenko (2004)  \hspace{1cm} Petrova (1999b)
Dlugach and Petrova (2003) \hspace{1cm} Petrova and Markiewicz (1997)
Dlugach et al. (2002a) \hspace{1cm} Rannou et al. (1997)
Dlugach et al. (2002b) \hspace{1cm} Wolff and Clancy (2003)
Mishchenko (1991f) \hspace{1cm} Wong et al. (2004)
Petrova (1999a)

2.39. **T-matrix modeling of scattering properties of interstellar, interplanetary, and cometary particles**

Andersen et al. (2002) \hspace{1cm} Mishchenko (1991b)
Andersen et al. (2004) \hspace{1cm} Petrova et al. (2000)
Bonev et al. (2002) \hspace{1cm} Petrova et al. (2001a)
Gledhill and McCall (2000) \hspace{1cm} Petrova et al. (2001b)
Gustafson et al. (2001) \hspace{1cm} Porco et al. (2003)
Iatì et al. (2001) \hspace{1cm} Quinten et al. (2002)
Kerola and Larson (2001) \hspace{1cm} Saija et al. (2001a)
Kimura (2001) \hspace{1cm} Saija et al. (2003a)
Kimura et al. (2003) \hspace{1cm} Throop and Esposito (1998)
Kolokolova (2004) \hspace{1cm} Tishkovets (1994)
Kolokolova et al. (1997) \hspace{1cm} Tishkovets and Litvinov (1999)
Landgraf et al. (1999) \hspace{1cm} Tishkovets et al. (2004b)
Lucas (2003) \hspace{1cm} Whitney and Wolff (2002)
Lumme (2000) \hspace{1cm} Wurm and Schnaiter (2002)
Mishchenko (1989) \hspace{1cm} 
Mishchenko (1990c) \hspace{1cm} 

2.40. **T-matrix computations for industrial and military applications**

Appleyard and Davies (2004) \hspace{1cm} Quinten (1999)
Auger et al. (2003) \hspace{1cm} Ryde and Matijević (1994)
Doicu et al. (1998) \hspace{1cm} Vargas (2003)
Joshi et al. (2003) \hspace{1cm} Vargas et al. (2001)
2.41. T-matrix computations for biomedical applications

Barber (1977b)  
Barber (1978)  
Enejder et al. (2003)  
Holler et al. (2000)  
Iskander et al. (1980)  
Khlebtsov et al. (1994)  
Khlebtsov et al. (1995)  
Khlebtsov et al. (1996b)  
Khlebtsov et al. (1999a)  
Khlebtsov et al. (2002a)  
Khlebtsov et al. (2002b)  
Khlebtsov et al. (2004b)  
Lakhtakia and Iskander (1983a)  
Lakhtakia and Iskander (1983b)  
Lakhtakia et al. (1981)  
Lakhtakia et al. (1982a)  
Lakhtakia et al. (1984c)  
Lakhtakia et al. (1986)  
Lakhtakia and Iskander (1986)  
Lambert et al. (2003)  
Lopatin and Sid’ko (1988)  
Massoudi et al. (1982)  
Mourant et al. (2002)  
Mroczka et al. (2002)  
Muttiah (2002)  
Nilsson et al. (1998)  
Paramonov (1994a)  
Shvalov et al. (2000)  
Sid’ko et al. (1980)  
Skaropoulos et al. (1996)  
Videen and Ngo (1998)  
Videen et al. (1998)  
Wang and Barber (1979)

2.42. T-matrix computations of anisotropic properties of colloids and other disperse media

Baran et al. (2001a)  
Borghese et al. (2001)  
Czekala (1998)  
Fucile et al. (1995)  
Huang and Jin (1998)  
Jin and Huang (1996b)  
Khlebtsov (1998)  
Khlebtsov and Melnikov (1998)  
Khlebtsov et al. (1991)  
Khlebtsov et al. (1992)  
Khlebtsov et al. (1999b)  
Mishchenko (1990c)  
Mishchenko (1991b)  
Varadan et al. (1985b)

3. Particles near infinite interfaces

3.1. Seminal publications

Karlsson and Kristensson (1983)  
Kristensson (1980)  
Kristensson and Ström (1980)  
Kristensson and Ström (1982)

3.2. Spherically symmetric particles

Aslan et al. (2004)  
Bobbert and Vlieger (1986)  
Bobbert et al. (1986)  
Bobbert et al. (1988)
3.3. Non-spherically symmetric finite particles

Bobbert et al. (1987) Simonsen et al. (2000)
Denti et al. (1999a) Videen (1997)
Denti et al. (1999b) Wind et al. (1987a)
Doicu et al. (1999a) Wind et al. (1987b)
Doicu et al. (2000a) Wind et al. (1988)
Lazzari et al. (2001)

3.4. Finite particles on incident side of planar interface

Bobbert and Vlieger (1986) González et al. (2001)
de la Peña et al. (1999b) Kim et al. (2004)
Denti et al. (1999a) Lazzari et al. (2001)
Denti et al. (1999b) Lazzari et al. (2002)
Doicu et al. (1999a) Ngo and Videen (1997)
Doicu et al. (2000a) Ruppin (1991)
Fucile et al. (1997b) Simonsen et al. (2000)
3.5. Finite particles on transmitted side of planar interface

- Aslan et al. (2004)
- Doicu et al. (2001)
- Ishikawa et al. (2000)
- Liu et al. (2000a)
- Quinten et al. (1999)
- Videen et al. (2004)
- Wannemacher et al. (1999)
- Zvyagin and Goto (1998)
- Videen (1993)
- Videen (1996)
- Videen et al. (2004)
- Videen (1993)
- Videen (1996)
- Videen et al. (1992)
- Wriedt and Doicu (1998a)
- Wriedt and Doicu (2000)

3.6. Two-dimensional particles near planar substrates

- Borghi et al. (1996a)
- Borghi et al. (1996b)
- Borghi et al. (1997)
- Borghi et al. (1999)
- Borghi et al. (2000)
- de la Peña et al. (1999a)
- Lee (1999)
- Lee and Grzesik (1998)
- Rao and Barakat (1989)
- Rao and Barakat (1991)
- Rao and Barakat (1994)
- Videen and Ngo (1997)

3.7. Tools for particle characterization

- Aslan et al. (2004)
- Bobbert and Vlieger (1987)
- Bobbert et al. (1986)
- Bobbert et al. (1987)
- Bobbert et al. (1988)
- de la Peña et al. (1999a)
- de la Peña et al. (1999b)
- Doicu et al. (2001)
- Ishikawa et al. (2000)
- Johnson (1994)
- Kim et al. (2002)
- Kim et al. (2004)
- Liu et al. (2000a)
- Quinten et al. (1999)
- Videen (1997)
- Wannemacher et al. (1999)
- Wind et al. (1987a)
- Wind et al. (1987b)
- Videen et al. (1992)
- Videen et al. (1993)
- Zvyagin and Goto (1998)

3.8. Convergence of results

- de la Peña et al. (1999a)
- de la Peña et al. (1999b)
- Doicu et al. (1999a)
- González et al. (2001)
- Johnson (1996)
- Videen et al. (1992)
- Videen et al. (1993)
- Videen et al. (1992)
- Videen et al. (1993)
3.9. Resonances

Borghese et al. (1997)  Liu et al. (2000a)
Ishikawa et al. (2000)  Quinten et al. (1999)
Lazzari et al. (2002)

3.10. Normally incident interaction-field approximation

de la Peña et al. (1999a)  Videen (1993)
de la Peña et al. (1999b)  Videen (1995)
Kim et al. (2002)  Videen et al. (1992)
Videen (1991)

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